Does distance still matter? Geographic proximity and new product development

Shankar Ganesan
Associate *professor*
Marketing
University of Arizona
sganesan@eller.arizona.edu

Alan J. Malter
Assistant professor
Marketing
University of Arizona
amalter@eller.arizona.edu

Aric Rindfleisch
Associate *professort*
Marketing
University of Wisconcin-Madison
aric@bus.wisdom

ABSTRACT

Many firms rely on external organizations to acquire knowledge that is useful for developing creative new products and reducing the time needed to bring these products to market. Cluster theory suggests that this knowledge is often obtained from organizations located in close geographic proximity. Specifically, proximity is assumed to foster heightened face-to-face communication, strengthened relational ties, increased knowledge acquisition, and enhanced new product outcomes. The authors identify the limitations of these assumptions and offer an enriched model of the influence of geographic proximity on new product development, which they test using both a cross- sectional survey of 155 firms in the U.S. optics industry and a longitudinal follow-up survey of 73 of these firms. They find that firms located in close proximity engage in increased face-to-face communication, but this communication has little effect on the acquisition of the types of knowledge that lead to enhanced new product outcomes. In contrast, they find that e-mail communication leads to both enhanced new product creativity and development speed. In addition, they find that relational ties moderate rather than mediate the path connecting geographic proximity and new product outcomes. These findings imply that the new product development outcomes typically ascribed to close geographic proximity may actually be attributed to strong relational ties.

In the continual search for competitive advantage, firms try to develop innovative new products as quickly as possible. The importance of new product development for long-term competitive success is widely recognized by the marketing community (for a review, see Hennart and Szy- manski 2001). In general, marketing has viewed the development of new products from the perspective of an isolated firm engaged in solo activity. Thus, the major thrust of extant new product development research has been on internal processes, such as the formation and coordination of new product development teams (e.g., Olson, Walker, and Reukert 1995; Sarin and Mahajan 2001) and the role of organizational culture in new product development success (e.g., Deshpande, Farley, and Webster 1993; Moorman 1995).

Because of the growth of global competition, rapid technological advances, and increasing demands from customers, many firms realize that they need help from external organizations, such as customers, suppliers, and even competitors, to develop innovative and timely new products (Wind and Mahajan 1997). In response, an increasing number of marketing studies have begun to examine new product development alliances (Rindfleisch and Moorman 2001, 2003; Sivadas and Dwyer 2000). However, research suggests that formal alliances represent only a small fraction of interorganizational influence on new product development because much of this influence comes in the form of informal information sharing rather than formal agreements (Allen 1983; Von Hippel 1987). To date, the marketing literature has little to contribute to the nature or the impact of this informal information sharing on new product development activities.

Outside of marketing, however, the connection between informal interorganizational information sharing and new product development has received considerable attention from scholars who study industry clusters. These scholars argue that informal information sharing is vital for new product development and that this sharing is facilitated by geographic proximity, which serves to enhance face-to-face communication and the development of strong relational ties (Gordon and McCann 2000; Porter 1998a, b; Sternberg 1999). As evidence for these claims, the cluster literature has generated many case studies that document the innovation-related benefits associated with such industry clusters as Silicon Valley (Saxenian 1994), the Formula 1 race car cluster near London (Henry and Pinch 2000), and the knitwear and clothing clusters in northern Italy (Rosenfeld 1997). Although these case studies suggest a wide range of benefits for firms located in such clusters, the evidence is mostly anecdotal and does not directly examine the process by which geographic proximity affects new product outcomes.

In this article, we offer a new conceptual model of how geographic proximity affects new product development out- comes. However, rather than taking cluster theory's assumed linkages at face value, we offer an enriched theoretical explanation that integrates cluster theory with research on electronic communication, interorganizational relationships, organizational learning, and new product development. This alternative model accounts for important subtleties that cluster theorists have not considered. For example, we question the widely held assumption that geo- graphic proximity leads to close relational ties (e.g., Porter 1998a, b). Similarly, our model recognizes that electronic communication may rival face-to-face contact as a means to acquire key knowledge. We test the proposed model through both a cross-sectional survey of 155 optics manufacturing firms and a longitudinal survey of 73 of these firms.

THE ROLE OF DISTANCE IN MARKETING AND BEW PRODUCT DEVELOPEMENT

The role of distance (or location) has a long history in the marketing literature and has been examined across a wide range of contexts, including marketing-mix decisions (e.g., Howard 1957), retail structure (e.g., Cox 1959; Ingene and Brown 1987), distribution channel design (e.g., Bucklin 1966), and manufacturing investment (e.g., Alderson and Green 1964; Greenhut 1956). In general, this earlier literature focused on spatial distribution of buyers and sellers and physical distribution costs. More recent marketing studies examine the role of geographic proximity in interfirm relations, finding that firms in close geographic proximity face lower costs (Cannon and Homburg 2001), display a weaker competitor focus (McEvily and Zaheer 1999), and draw on each other's knowledge base when developing new products (Rosenkopf and Almeida 2001). Thus, the marketing literature has shown an enduring interest in geographic location; however, it has given relatively little attention to the role of location in interorganizational new product development.

Geographic proximity has also been the subject of considerable inquiry among economists (e.g., Krugman 1991; Marshall 1920). For example, the concept of "agglomerative economies" argues that geographically concentrated firms in the same industry benefit from externalities, such as access to skilled labor, existing channels of distribution, and knowledge spillovers (e.g., Ciccone and Hall 1996; Goldstein and Gronberg 1984). This view has given rise to the concept of industry clusters (also known as "industrial districts") among scholars in economic geography, regional development, and business strategy (e.g., Porter 1990, 1998a, b; Rosenfeld 1997; Saxenian 1994; Sternberg 1991). According to Porter (1998b, p. 199), clusters are "a geo- graphically proximate group of interconnected companies and associated institutions in a particular field." An essential difference between the older concept of agglomerative economies and the newer study of industry clusters is the notion that in addition to enjoying a common set of externalities, the members of a cluster also share close relational ties (i.e., norms of trust and reciprocity) that foster knowledge exchange (Harrison 1992; Rosenfeld 1997). In contrast to new product alliances, cluster-based knowledge sharing largely reflects informal mechanisms rather than formalized cooperative arrangements (Enright 1991).

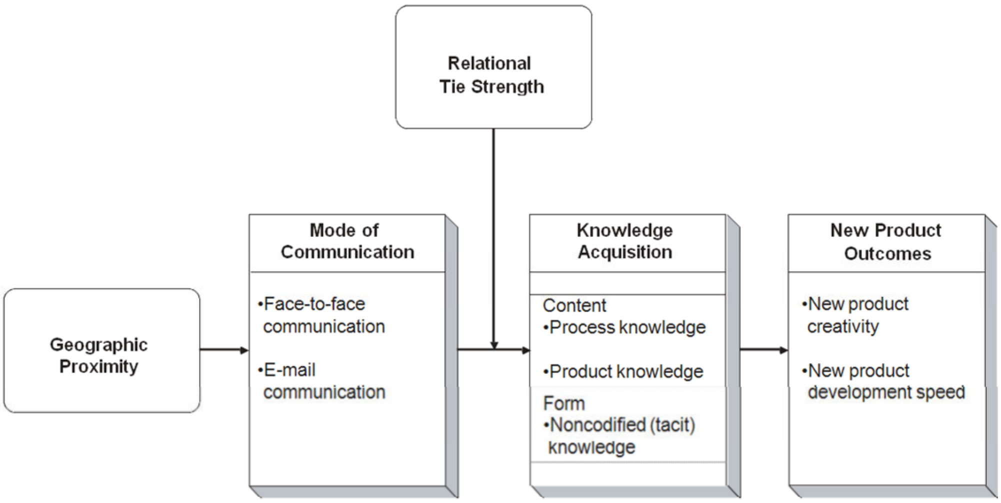
Cluster theorists argue that clusters represent a new way to view competitiveness and strategy in general (e.g., Porter 1990, 1998a, b). Specifically, cluster theory offers a novel, institutional perspective on marketing strategy by suggesting that individual firm-level outcomes are influenced by a manufacturer's location in a broader, geographically concentrated learning community. Thus, cluster theory points to the important role of external players, such as nearby suppliers, customers, competitors, and research institutes. A firm's relationships (both geographic and social) with these broader constituents are believed to play a key role in its learning ability, innovation outcomes, and ultimate success (Porter 1998a, b; Saxenian 1994). As a result, cluster theory emphasizes the importance of external agents in providing firms with the information and know-how necessary for innovative activities.

To date, cluster research concentrates on either developing theoretical treatises of the benefits of geographic proximity or demonstrating industry clusters in action through case studies of prominent clusters. In general, cluster advocates seem to suggest that geographic proximity provides an almost magical effect on new product innovation. The purported benefits of geographic proximity for new product development hinge on three critical but relatively untested assumptions: (1) proximity enhances face-to-face communication and the development of strong relational ties (e.g., Enright 1991; Rosenfeld 1997; Saxenian 1994), (2) face-to-face communication is the optimum way to acquire knowledge (e.g., Porter 1998b; Sternberg 1991), and (3) the most valuable knowledge comes in tacit (i.e., noncodified) form (e.g., Porter 1998b; Rosenfeld 1997). However, as we note in the following section, research on interorganizational relationships, electronic communication, organizational learning, and new product development indicates that each of these assumptions may be either inaccurate or incomplete. Our next section integrates the key findings from these other literature bases into cluster theory to develop an enriched model of how geographic proximity influences new product development.

CONCEPTUAL FRAMEWORK

In line with both cluster theory (e.g., Saxenian 1994; Stern- berg 1999) and research on new product development (e.g., Moorman 1995), our conceptualization of how geographic proximity influences new product development focuses on the acquisition and utilization of new product–related knowledge. We define this knowledge as "technical information directly relevant to new product development" (Rindfleisch and Moorman 2001, p. 4) and recognize that this knowledge has properties of both form and content. The remainder of this section elucidates the theoretical basis of our model and its hypothesized effects, which we graphically depict in Figure 1.

Figure 1
The effect of geographic proximity and relational ties on new product outcomes



Geographic proximity, communication and relational ties

The fundamental tenet of cluster theory is that close geographic proximity enables frequent face-to-face contact with key knowledge providers, including suppliers, buyers, research institutes, alliance members, and even competitors (Audretsch 1998; Enright 1991; Rosenfeld 1997). For example, Sternberg (1991) describes how shared geographic proximity among optics firms in Rochester, N.Y., enables them to engage in frequent face-to-face communication through such forums as local engineering association meetings. Likewise, Audretsch and Stephan (1996) suggest that close geographic proximity facilitates a firm's face-to-face contact with scientists from research institutes through participation in local workshops and seminars and through informal social interactions. This purported link is also supported by research on interpersonal communication, which has found that physical proximity is positively related to greater amounts of face-to-face communication (Conrath 1973; Gullahorn 1952).

In addition to communicating face-to-face, cluster members can also communicate with one another through several alternative communication channels, such as telephone, fax, mail, e-mail, and electronic discussion groups. To date, the cluster literature is largely silent on the relationship between geographic proximity and these alternative modes of communication. Intuitively, there is no reason to expect that physical closeness should enhance these other forms of communication, because most of them have been developed to overcome physical distance (Audretsch and Stephan 1996). Indeed, because new product development personnel in organizations located further away (i.e., beyond a short driving distance) should have less opportunity to meet face-to-face, they may favor the increased usage of distance-spanning communication such as e-mail as a partial substitute for face-to-face meetings. However, the lack of prior research on this topic does not provide a solid basis to hypothesize that proximity will be either positively or negatively related to e-mail communication. Thus:

H_1: Geographic proximity is (a) positively related to the frequency of face-to-face communication but (b) unrelated to the frequency of e-mail communication.

Geographic proximity is also believed to help firms develop strong relational ties with their knowledge providers (Audretsch 1998; Harrison 1992; Henry and Pinch 2000; Porter 1998a). For example, Harrison (1992) notes that the repeated interaction (both planned and unplanned) afforded by close geographic proximity helps firms develop mutual trust. As Rosenfeld (1997, p. 20) suggests, "Trust is established through the kind of informal business and social exchanges that take place at barbecues and golf events, not videoconferences." This view is also echoed by sociologists, who argue that close physical proximity enhances the development of trust and reciprocity among community members (Etzioni and Etzioni 1999). Thus, close geographic proximity is assumed to enhance the formation of "strong ties" between knowledge providers and receivers (see Granovetter 1973).

Although geographic proximity may foster the development of strong ties among some cluster members, the generalizability of this relationship remains an open question. The literature does not provide empirical evidence of such a relationship. As Granovetter (1973) notes, strong ties take a considerable amount of time and effort to build and maintain. Thus, social communities are likely to be composed of a few strong ties and many weak ones. According to Van der Linde (2003), geographically concentrated industry clusters often consist of hundreds of firms. Thus, it seems untenable that a firm would develop strong relational ties with all the suppliers, buyers, competitors, and research institutes within close geographic proximity. Moreover, in the marketing relationship literature, geographic proximity is not a central component of any existing conceptualizations of relational norms, commitment, or trust (e.g., Ganesan 1994; Heide 1994; Moorman, Zaltman, and Deshpandé 1992). Therefore, we diverge from cluster theory by suggesting that relational closeness is not synonymous with or an automatic consequence of geographic proximity; we consider it an exogenous construct in our conceptual model.

Thus:

H_2:Geographic proximity is unrelated to relational tie strength with knowledge providers.

Communication, knowledge acquisition and relational ties

As we previously noted, cluster theorists emphasize the importance of interpersonal, face-to-face communication for knowledge acquisition. Our conceptual model attempts to enrich this view by adopting a broader perspective of both constructs. Specifically, as our first hypothesis suggests, e-mail communication is an important means of knowledge acquisition. Moreover, we recognize that knowledge has properties of both form and content. In this section, we specify the relationship between communication mode and knowledge type in greater detail, and we consider the moderating role of relational ties.

Communication and knowledge form. The cluster literature emphasizes tacit knowledge acquisition as a key out- come of face-to-face communication (Enright 1991; Porter 1998a, b; Rosenfeld 1997). However, tacit knowledge is inherently difficult to articulate (Polanyi 1966); it is difficult to codify in writing, tends to be hands-on and informal in nature, and is thus difficult to transfer to others (Stern- berg et al. 2000). Such noncodified knowledge is viewed as best delivered through individual, face-to-face contact in an apprentice-like manner. This view of tacit knowledge focuses on the form (i.e., codification in writing) of knowledge as a key property that affects its ease of transfer (Kogut and Zander 1992). Everyday examples of noncodified knowledge include such practical know-how as tying shoes or riding a bicycle. In an industrial context, noncodified knowledge often includes the embodied know-how of a skilled technician, which can be essential to the development of innovative routines to manufacture new products.

Given its embodied nature, knowledge in noncodified form is assumed to be best transmitted through the intimate, high-context, and hands-on setting of face-to-face interaction rather than through less personal, sensory-poor, distance-spanning communication vehicles, such as telephone conversations or e-mail messages (Baptista 2001; Zaheer and Manrakhan 2001). In addition to being intimate and informal, face-to-face communication is also considered richer and more capable of conveying more nuanced understandings because of its use of nonverbal cues and the ability to provide synchronous feedback (Daft and Lengel 1986). Thus, the rich modality of face-to-face communication should enhance noncodified knowledge acquisition (Porter 1998a, b; Sternberg 1991). Thus:

H_3:Face-to-face communication is more strongly related to noncodified knowledge acquisition than is e-mail communication.

Communication and knowledge content (product and process). Research on organizational learning suggests that in addition to form, content is another important aspect of knowledge. This literature distinguishes between product knowledge and process knowledge (Kogut and Zander 1992; Rindfleisch and Moorman 2001). Product knowledge encompasses facts, whereas process knowledge encompasses procedures (Kogut and Zander 1992; Zander and Kogut 1995). Because we expect that relational ties have a moderating influence on the effect of mode of interpersonal communication on the acquisition of each type of knowledge content, we do not offer a hypothesis about the direct effects between these constructs; instead, we focus on the more nuanced moderating role of relational ties.

The moderating role of relational ties. Although relational ties are unlikely to covary with geographic distance, we suggest that these ties are important in terms of the acquisition of knowledge content from knowledge providers. Specifically, we propose that relationship tie strength moderates the relationship between the communication mode and both product and process knowledge acquisition. This premise is based on findings from the strength-of-ties literature, which suggests that valuable knowledge is much more likely to be transmitted through strong ties than through weak ones. For example, Frenzen and Nakamoto (1993) show that consumers are significantly more willing to transmit knowledge about an important sale to a close friend than to a casual acquaintance. In an organizational context, Rindfleisch and Moorman (2001) find that tie strength is positively associated with knowledge acquisition in new product alliances.

Specifically, we propose that strong relational ties enhance the transfer of each type of knowledge content through its primary communication mode (i.e., face-to-face or e-mail). An important dimension of knowledge that affects its ease of transfer is complexity. Zander and Kogut (1995) argue that more complex knowledge (i.e., knowledge that involves a larger number of critical and interacting elements) is more difficult to communicate and transfer to another organization. According to this view, product- related knowledge tends to be relatively simple and straight- forward; thus, product knowledge should be highly amenable to e-mail communication. In contrast, knowledge about processes tends to be more complex; thus, it is more difficult to communicate, rendering it more amenable to face-to-face communication. Unlike e-mail, face-to-face communication affords the opportunity to explain highly detailed specifications, monitor a recipient's understanding, and clarify misunderstandings in real time. Strong relational ties should enhance the transfer of both types of knowledge because the closeness and mutual reciprocity that characterize such ties (e.g., Granovetter 1973) will enhance the ability and motivation of knowledge providers to better under- stand how best to convey and clarify both product and process knowledge. Thus:

H_{4a}: Relational tie strength moderates the effect of e-mail communication on product knowledge acquisition such that its acquisition is greater among firms with strong ties to their knowledge providers.

H_{4b}: Relational tie strength moderates the effect of face-to- face communication on process knowledge acquisition such that its acquisition is greater among firms with strong ties to their knowledge providers.

Knowledge acquisition and new product outcomes

As several new product development scholars note, knowledge is the foundation for new product innovation (Kotabe and Swan 1995; Madhavan and Grover 1998; Moorman and Miner 1998). Both the form and the content of this knowledge appear to be important inputs to successful new product development outcomes. For example, noncodified (tacit) knowledge is viewed as providing firms with the embodied know-how necessary to develop innovative products (Non- aka, Toyama, and Konno 2000). Conversely, product and process knowledge provide the important facts, specifications, and procedural details that enable a firm to control the innovation process (Nonaka and Takeuchi 1995).

For many firms, two of the most critical outcomes of new product development are (1) the creativity of new products and (2) the speed with which these products are developed (Griffin 1993; Moorman 1995). Although these outcomes are often positively related (Rindfleisch and Moorman 2001), they appear to have different antecedents in terms of knowledge inputs. Specifically, new product creativity is most often determined in the early stages of the product development process (Urban and Hauser 1980). Research indicates that the initial stages of idea generation and concept testing are highly reliant on the development or acquisition of novel concepts and findings (i.e., product knowledge) (Andrews and Smith 1996). In contrast, the speed of new product development is more highly dependent on later stages of the product development process (Urban and Hauser 1980). Research suggests that late-stage activities, such as prototype development and manufacturing design, rely heavily on the development or acquisition and application of efficient processes and procedures (i.e., process knowledge) (Millson, Raj, and Wilemon 1992).

An examination of the different knowledge needs of new product creativity and development speed suggests that creativity mostly depends on product knowledge acquisition, whereas speed mostly depends on process knowledge acquisition (Miner, Bassoff, and Moorman 2001; Rind- fleisch and Moorman 2001). Furthermore, noncodified knowledge appears to influence creativity and speed differently. Specifically, the informal, unstructured, and dynamic nature of tacit knowledge should enhance new product creativity (Cooke and Morgan 1998; Leamer and Storper 2001) but hamper the speed of new product development (Hansen 1999; Zander and Kogut 1995). Thus:

> H_5: New product creativity is more strongly influenced by product knowledge than by process knowledge.

> H_6: New product development speed is more strongly influenced by process knowledge than by product knowledge.

> H_7: (a) New product creativity is positively related to noncodified knowledge, whereas (b) new product development speed is negatively related to noncodified knowledge.

Organizational learning scholars often characterize the acquisition and utilization of knowledge as a dynamic process that unfolds over time (Moorman 1995; Nonaka, Toyama, and Konno 2000). To use acquired knowledge fully, organizations must engage in assimilation, sense-making, and dissemination activities. The dynamic nature of organizational learning is reflected in the concept of absorptive capacity, which posits that over time, firms can develop their ability to assimilate and apply knowledge effectively (Cohen and Levinthal 1990). Although absorptive capacity has traditionally been conceptualized as a by-product of internal research and development (R&D), recent research suggests that it can also be fostered by the acquisition of information from external knowledge providers (Scott 2003; Zahra and George 2002). Thus, in addition to enhancing short-term effects on new product outcomes by providing information that helps a firm solve an immediate new product development dilemma, product and process knowledge acquisition can also have a longer-term payoff for new product development by enhancing a firm's basic ability to develop new products in a more creative and timely manner.

Tacit knowledge is also a dynamic entity that can take considerable time to convey and acquire (Polanyi 1966). For example, in Germany, the making of optical instruments has been called the "technology of the golden hands," requiring specialized skills that are traditionally passed from an experienced craftsman to an apprentice over a period of several years (Enright 1991). Thus, cluster theory's assumed beneficial effects of tacit knowledge on new product development outcomes may occur over a lengthy period. Over time, the positive effects of acquiring noncodified knowledge on new product creativity should be enhanced, whereas its negative effects on new product development speed should be attenuated as the recipient firm acquires a deeper level of understanding and learns heuristic shortcuts to speed new products to market. Thus, we expect the following effects of knowledge acquisition (both content and form) on new product outcomes over time:

> H_8: The positive effect of acquiring product knowledge on new product creativity is strengthened over time.

> H_9: The positive effect of acquiring process knowledge on new product development speed is strengthened over time.

> H_{10}: (a) The positive effect of noncodified knowledge on new product creativity is strengthened over time, and (b) the negative effect of noncodified knowledge on new product development speed is weakened over time.

METHOD

Participants and procedures

We selected the U.S. optics industry as the context for our inquiry. This industry is particularly appropriate because optics manufacturers place considerable importance on knowledge acquisition and new product development (Committee on Optical Science and Engineering 1998). In addition, most U.S. optics firms and research institutions are located in a few geographically concentrated clusters (e.g., Boston, Boulder, Orlando, Rochester, Tucson).

Although all optical products share a common basis in the science of light and light transmission, the industry includes a diverse range of products and applications (e.g., fiber optics for telecommunications, imaging systems for medical and office equipment, lenses for microscopes and telescopes) and does not fall neatly into existing industry classification systems, such as Standard Industrial Classification codes. Therefore, we constructed our own database of optics manufacturers from membership directories of professional societies and regional industry associations. From these sources, we identified 655 U.S. optics firms for possible inclusion in our study.

In line with prior studies of new product development (e.g., Rindfleisch and Moorman 2001; Robertson and Gatignon 1998), we identified specific key informants (Campbell 1955), targeting vice presidents of R&D or people in similar high-level positions with intimate knowledge of their firms' new product development activities. Precontacting these people for verification eliminated 219 firms that were either not manufacturers or not engaged in any recent new product development or for which we were not able to identify a knowledgeable informant. This screening process yielded a sampling frame of 436 firms.

Initialsurvey. We mailed each firm a cover letter, an endorsement letter from the head of a leading university- based optical sciences center, a survey, a postage-paid reply envelope, and $5 as an incentive. Three weeks later, we sent a reminder postcard. We mailed a second set of survey materials (sans the $5) to firms that did not respond within six weeks. Twelve surveys were returned as undeliverable, and another 36 firms replied that they were not currently involved in any new product activities. This left a final sampling frame of 388 firms, 169 of which returned the survey (155 were usable), for an effective response rate of 44%. The response rate and sample size compare favorably with recent studies of new product development (e.g., Sivadas and Dwyer 2000). We received the 155 usable responses from firms in 25 states, including each of the eight U.S. optics clusters. Of the 155 responding firms, 124 (80%) were located in an optics cluster, and the rest were located in states without a large concentration of optics firms.

We assessed potential nonresponse bias through an extrapolation method that compared early respondents with late respondents (Armstrong and Overton 1977). We found no significant differences in means or variances for any key constructs between early (i.e., before the second mailing) and late (i.e., after the second mailing) respondents, suggesting that nonresponse bias was not a problem in this study. As a validity check, respondents reported that they were highly knowledgeable about (mean = 6.62 on a seven- point scale) and involved in (mean = 6.38 on a seven-point scale) the focal new product development project and had worked for their firm for an average of ten years. Seventy- one percent were chief executive officers, presidents, vice presidents, or directors, and most respondents (72%) had advanced degrees. These results suggest that our sampling approach was successful in identifying knowledgeable key informants.

Follow-up survey. Approximately 30 months following the mailing of our initial survey, we conducted a follow-up survey to test our three longitudinal hypotheses (H_8, H_9, and H_{10}). We sent surveys to 152 of our original respondents (three respondents did not provide contact information). Surveys for 27 firms were undeliverable because of a combination of factors, leaving a final sampling frame of 125 firms. Of the surveys, 73 were returned for an effective response rate of 58%. Of the 73 responding firms, 56 (77%) were located in an optics cluster. The firms that responded to the follow-up survey were statistically similar to the non-responding firms.

Measures and validation

Measure development began with field interviews and pretests of the survey among several people who were connected to the U.S. optics industry. These efforts helped develop and refine our measurement scales and general survey design. Subsequently, we detail the measures we used to assess our key constructs and control variables, and we provide their intercorrelations, reliability indexes, and descriptive statistics in Table 1. The specific wording and scaling used for each measure appear in the Appendix. To ground our measurement assessment, we instructed all respondents to "focus on one specific new product project that either has recently concluded or has been active over the past six months."

Key knowledge provider. We asked respondents to select the most important optics firm or research institution their firm had been in contact with during the focal project and to classify the nature of their relationship with this organization (e.g., supplier, customer, competitor). They were told that formal or contractual relations with this organization were not necessary. We refer to this organization as the key knowledge provider. The majority of key knowledge providers were channel members (suppliers = 40%, customers = 22%). The rest were research institutions (19%), alliance partners (12%), competitors (2%), and others (5%).

Geographic proximity. We assessed geographic proximity by asking respondents to report the locations and distances (in miles) of the optics firm or research institute they identified as a key knowledge provider. We confirmed (and adjusted when necessary) this self-reported distance by calculating the actual geographic distance between the respondent's firm and the key knowledge provider using distance calculation applications (e.g., MapQuest).

As Table 1 shows, on average, the firms in our sample were located more than 1000 miles from their key knowledge provider. Of the firms, 33% were located less than 100 miles from the key knowledge provider (i.e., within a two- hour drive), whereas 20% were located more than 2000 miles from the key knowledge provider. To control for this distributional skewness, we transformed geographic distance using a log transformation.

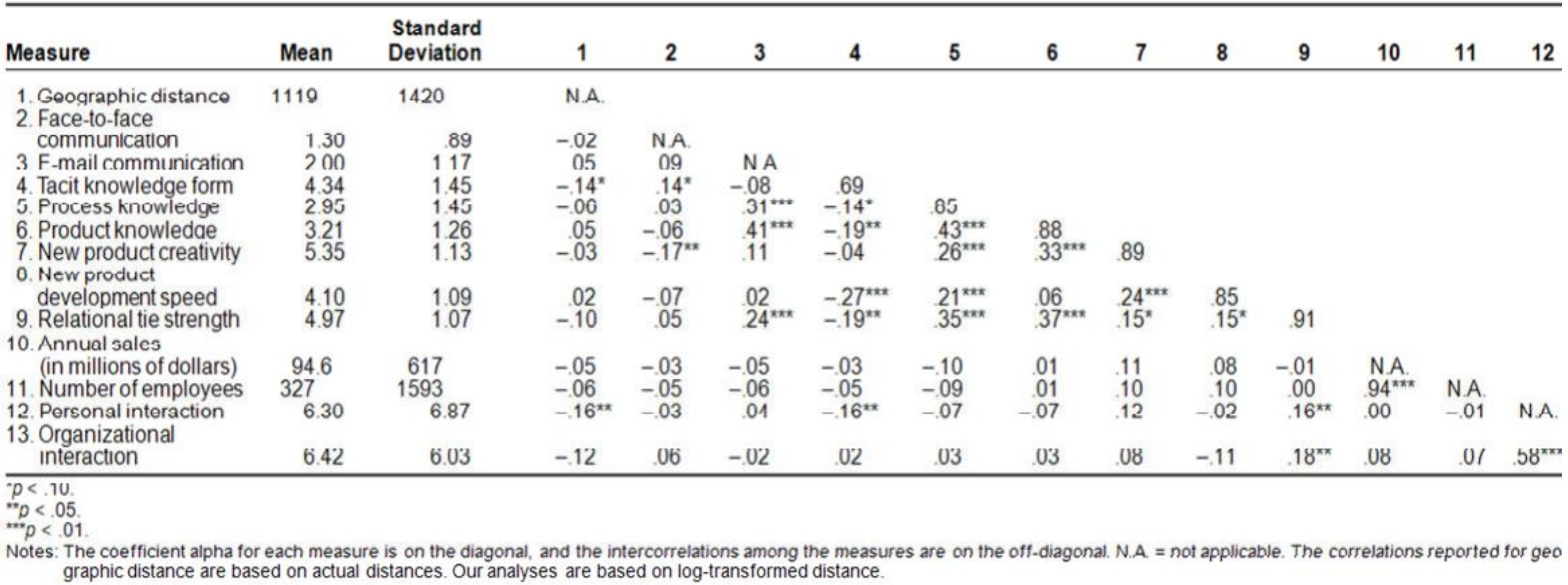
Relational tie strength. We measured strength of the relational tie between the respondent's firm and the focal knowledge provider with a five-item version of the relational embeddedness scale that Rindfleisch and Moorman (2001) developed. As Granovetter (1985) notes, highly embedded relations are composed of firms that share strong ties with one another. We assessed relationship embeddedness in both our initial and follow-up surveys (r = .74). This scale displayed strong reliability ($\alpha_{\text{initial}} = .91$, $\alpha_{\text{follow-up}} = .91$).

Interpersonal communication mode (face-to-face and e- mail). In line with previous research (e.g., Cannon and Homburg 2001; Hansen 1999; Mohr, Fisher, and Nevin 1996), we asked key informants how many times during the average workweek (over the previous six months) they personally communicated with scientists, engineers, or technical workers from the focal knowledge provider using each communication mode (i.e., face-to-face and e-mail). We chose to phrase this measure at an interpersonal level because cluster theory focuses on the role of interpersonal, face-to-face contact in knowledge transfer activity (Porter 1998a, b). The majority of our respondents (70%) were from small firms (i.e., 100 employees or less) and were often the founder, primary scientist, and principal communicator with external knowledge providers. Thus, we believe that our measures of communication mode tap the communication patterns of the person most centrally connected to the focal new product development project.

Knowledge form. The embodied and noncodified nature of tacit knowledge makes knowledge form an inherently difficult construct to measure. Nevertheless, prior research has successfully developed several measures of various aspects of this construct (e.g., Hansen 1999; Sternberg et al. 2000; Zander and Kogut 1995). We used a slightly adapted version of Hansen's (1999) three-item degree-of- knowledge-codification scale, which taps the form of acquired technical knowledge by asking respondents to rate the degree to which the knowledge received by their firm was tacit (cf. codified, written, and

Table 1

Key Measure Statistics



Measure	Mean	Standard Deviation	1	2	3	4	5	6	7	8	9	10	11	12
1. Geographic distance	1119	1420	N.A.											
2. Face-to-face communication	1.30	.89	−.02	N.A.										
3. E-mail communication	2.00	1.17	.05	.09	N.A.									
4. Tacit knowledge form	4.34	1.45	−.14*	.14*	−.08	.69								
5. Process knowledge	2.95	1.45	−.06	.03	.31***	−.14*	.85							
6. Product knowledge	3.21	1.26	.05	−.06	.41***	−.19**	.43***	.88						
7. New product creativity	5.35	1.13	−.03	−.17**	.11	−.04	.26***	.33***	.89					
8. New product development speed	4.10	1.09	.02	−.07	.02	−.27***	.21***	.06	.24***	.85				
9. Relational tie strength	4.97	1.07	−.10	.05	.24***	−.19**	.35***	.37***	.15*	.15*	.91			
10. Annual sales (in millions of dollars)	94.6	617	−.05	−.03	−.05	−.03	−.10	.01	.11	.08	−.01	N.A.		
11. Number of employees	327	1593	−.06	−.05	−.06	−.05	−.09	.01	.10	.10	.00	.94***	N.A.	
12. Personal interaction	6.30	6.87	−.16**	−.03	.04	−.16**	−.07	−.07	.12	−.02	.16**	.00	−.01	N.A.
13. Organizational interaction	6.42	6.03	−.12	.06	−.02	.02	.03	.03	.08	−.11	.18**	.08	.07	.58***

*$p < .10$.

**$p < .05$.

***$p < .01$.

Notes: The coefficient alpha for each measure is on the diagonal, and the intercorrelations among the measures are on the off-diagonal. N.A. = not applicable. The correlations reported for geographic distance are based on actual distances. Our analyses are based on log-transformed distance.

documented). Thus, higher scores indicate higher degrees of tacitness, and lower scores indicate higher degrees of codification. The alpha for this measure was .69.

Knowledge acquisition (product and process). To assess the amount of knowledge acquired from the firm's key knowledge provider, we adapted scales that Rindfleisch and Moorman (2001) developed to measure process knowledge acquisition (e.g., new manufacturing processes) and product knowledge (e.g., key product specifications). Note that knowledge content acquisition is assessed independently from the form (tacit or codified) of acquired knowledge because either process or product knowledge can be codi- fied or noncodified (Kogut and Zander 1992). Both mea- sures displayed good reliability ($\alpha_{process} = .85$, $\alpha_{product} = .88$).

New product outcomes (creativity and speed). To assess new product creativity and development speed, we used slightly adapted versions of scales that Rindfleisch and Moorman (2001) developed, and we assessed both out- comes in our initial and follow-up surveys. These measures displayed strong reliability in both surveys (initial survey: $\alpha_{creativity} = .89$, $\alpha_{speed} = .85$; follow-up survey: $\alpha_{creativity} = .88$, $\alpha_{speed} = .88$) and were significantly correlated over time ($r_{creativity} = .41$, $p < .001$; $r_{speed} = .31$, $p < .001$).

Control variables. We also asked respondents to report the number of years they (length of personal interaction) and their organization (length of organizational interaction) had interacted with the knowledge provider and the size of their firm in terms of annual sales revenue and number of employees.

Examination of dimensionality and discriminant validity. We assessed the unidimensionality of the measures we used in our initial survey with a confirmatory factor analysis model using LISREL 8.3. As Table 2 shows, all factor loadings were significant, and all fit indexes met or exceeded recommended levels (comparative fit index [CFI] = .90, nonnormed fit index [NNFI] = .90, root mean square error of approximation [RMSEA] = .07, and standardized root mean square residual [SRMR] = .08). Next, we calculated the composite reliability using the procedures that Fornell and Larcker (1981) suggest. We also examined the parameter estimates and their associated t-values and calculated the average variance extracted (AVE) for each construct (Gerbing and Anderson 1988). As Table 2 shows, composite reliabilities ranged from .78 to .90, indicating acceptable levels of reliability for the constructs (Fornell and Larcker 1981). Finally, the AVEs ranged from 51% to 61%, which are greater than the recommended level of 50% (Bagozzi and Yi 1988). We assessed discriminant validity by calculating the shared variance between all possible pairs of constructs and verified that they were less than the AVE for all individual constructs, thus satisfying Fornell and Larcker's (1981) test and indicating that our multi-item scales display adequate discriminant validity.

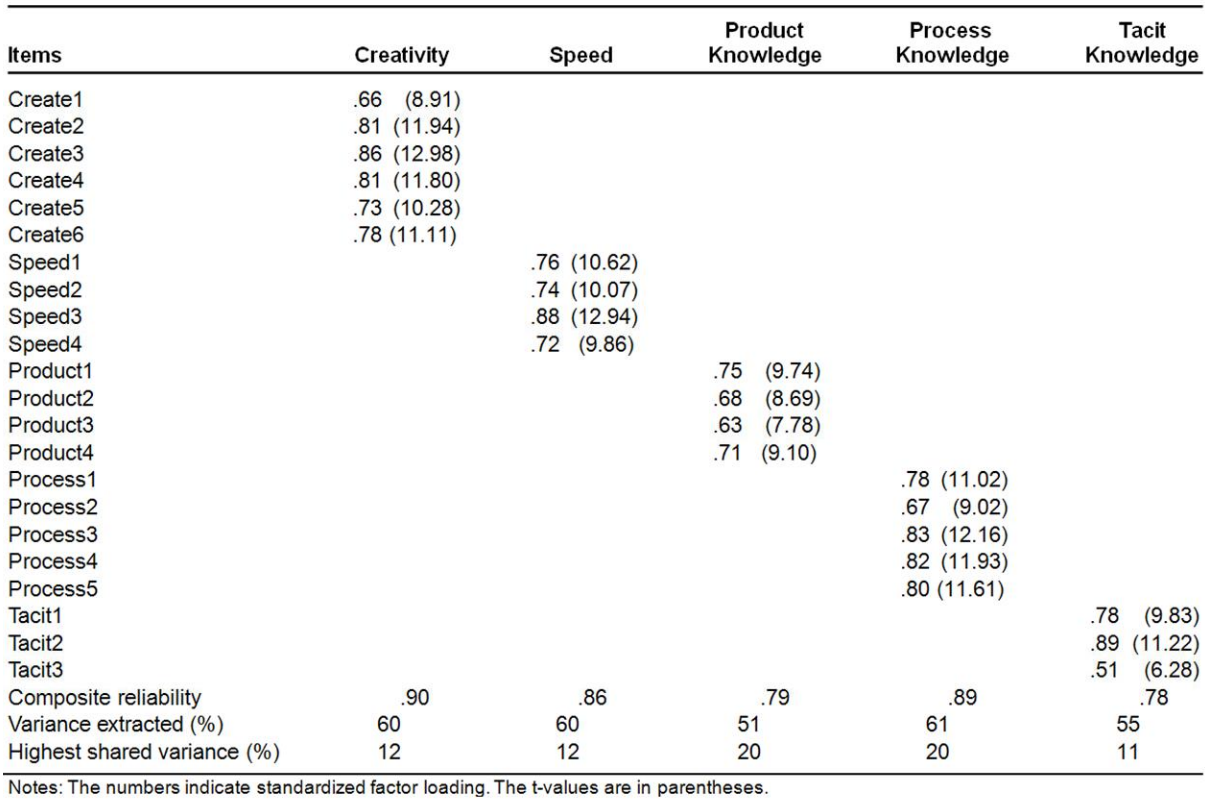
ANALYSIS AND RESULTS

We analyzed the data from our initial survey using structural equations modeling (LISREL 8.3). Specifically, we specified a model that examined our a priori hypothesized relationships (Model 1), a model that examined a post hoc set of expanded relationships (Model 2), and a model that investigated a competing perspective (Model 3). The standardized parameter estimates and standard errors for Model 1 and Model 2 appear in Table 3. We analyzed the data from our follow-up survey using regression analysis because the size of our follow-up sample (n = 73) did not allow us to employ structural equations modeling techniques (see Table 4).

Measurement model

In line with Bagozzi and Heatherton's (1994) suggestions, we created two composite items for each latent factor to serve as its indicators. We followed this approach for our five latent constructs (i.e., noncodified knowledge, process and product knowledge, and creativity and speed of new product development). We also included our three single- item measure constructs (i.e., geographic proximity and face-to-face and e-mail communication) and

Table 2
Measurement model parameters



Items	Creativity	Speed	Product Knowledge	Process Knowledge	Tacit Knowledge
Create1	.66 (8.91)				
Create2	.81 (11.94)				
Create3	.86 (12.98)				
Create4	.81 (11.80)				
Create5	.73 (10.28)				
Create6	.78 (11.11)				
Speed1		.76 (10.62)			
Speed2		.74 (10.07)			
Speed3		.88 (12.94)			
Speed4		.72 (9.86)			
Product1			.75 (9.74)		
Product2			.68 (8.69)		
Product3			.63 (7.78)		
Product4			.71 (9.10)		
Process1				.78 (11.02)	
Process2				.67 (9.02)	
Process3				.83 (12.16)	
Process4				.82 (11.93)	
Process5				.80 (11.61)	
Tacit1					.78 (9.83)
Tacit2					.89 (11.22)
Tacit3					.51 (6.28)
Composite reliability	.90	.86	.79	.89	.78
Variance extracted (%)	60	60	51	61	55
Highest shared variance (%)	12	12	20	20	11

Notes: The numbers indicate standardized factor loading. The t-values are in parentheses.

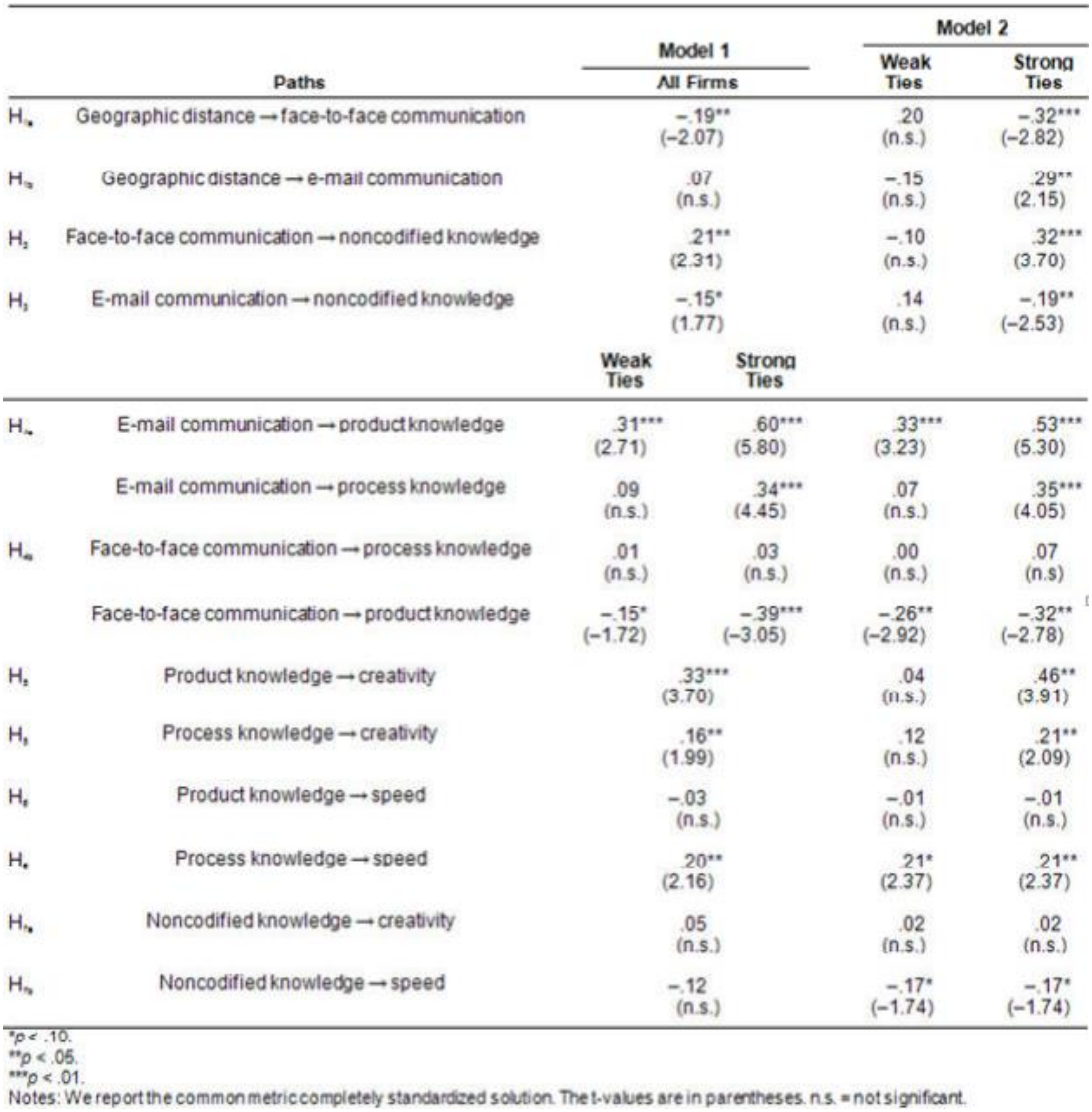
fixed their error variance on the basis of the reliabilities of each measure (Hayduk 1987). Finally, we included four control variaables (annual sales, number of employees, length of personal interaction, and length of organizational interaction), which we treated as independent variables along with geographic proximity.

Model 1 (hypothesized model) and model 2 (expanded model)

For efficiency purposes, we focus on the results from Model 1 and discuss only the paths in Model 2 that are substantively different from Model 1. With the exception of H_2, we describe our results in the order they are listed in our conceptualization and as portrayed from left to right in Figure 1. We save our discussion of the findings for H_2 until the competing model section (Model 3) because it entails the specification and testing of an alternative model. The fit statistics associated with Model 1 are reasonable (CFI = .88, IFI = .87, RMSEA = .08, and SRMR = .09), the overall R^2 is .34, and the explained variance of dependent variables ranged from .11 (creativity) to .56 (e-mail). However, model fit could still be improved. Therefore, we estimated a second model (Model 2) that duplicated the paths shown in Figure 1, adding relational tie strength as a moderator of the paths between geographic proximity and communication mode and the paths between knowledge acquisition and new product outcomes. The fit for this expanded model (CFI = .90, IFI = .91, RMSEA = .06, and SRMR = .09) is superior to Model 1.

Our conceptual model suggests that the effect of communication mode (face-to-face and e-mail) on knowledge content (process and product) is moderated by the strength of the relationship between the focal organization and its knowledge provider. We tested these moderating effects through multigroup analyses (Stone and Hollenbeck 1989) by partitioning our sample on the basis of a median split of relational tie strength (median = 5.0). We then assessed the invariance of the parameter estimates between the strong and the weak relational tie subgroups by comparing the chi- square from a model that constrained the paths between communication mode and knowledge content to equality with that of a

Table 3
Comparison of Results from Model 1 and Model 2



	Paths	Model 1		Model 2	
		All Firms		Weak Ties	Strong Ties
H_{1a}	Geographic distance → face-to-face communication	–.19** (–2.07)		.20 (n.s.)	–.32*** (–2.82)
H_{1b}	Geographic distance → e-mail communication	.07 (n.s.)		–.15 (n.s.)	.29** (2.15)
H_2	Face-to-face communication → noncodified knowledge	.21** (2.31)		–.10 (n.s.)	.32*** (3.70)
H_3	E-mail communication → noncodified knowledge	–.15* (1.77)		.14 (n.s.)	–.19** (–2.53)
		Weak Ties	Strong Ties		
H_{4a}	E-mail communication → product knowledge	.31*** (2.71)	.60*** (5.80)	.33*** (3.23)	.53*** (5.30)
	E-mail communication → process knowledge	.09 (n.s.)	.34*** (4.45)	.07 (n.s.)	.35*** (4.05)
H_{4b}	Face-to-face communication → process knowledge	.01 (n.s.)	.03 (n.s.)	.00 (n.s.)	.07 (n.s)
	Face-to-face communication → product knowledge	–.15* (–1.72)	–.39*** (–3.05)	–.26** (–2.92)	–.32** (–2.78)
H_5	Product knowledge → creativity	.33*** (3.70)		.04 (n.s.)	.46** (3.91)
H_6	Process knowledge → creativity	.16** (1.99)		.12 (n.s.)	.21** (2.09)
H_7	Product knowledge → speed	–.03 (n.s.)		–.01 (n.s.)	–.01 (n.s.)
H_8	Process knowledge → speed	.20** (2.16)		.21* (2.37)	.21** (2.37)
H_{9a}	Noncodified knowledge → creativity	.05 (n.s.)		.02 (n.s.)	.02 (n.s.)
H_{9b}	Noncodified knowledge → speed	–.12 (n.s.)		–.17* (–1.74)	–.17* (–1.74)

*$p < .10$.
**$p < .05$.
***$p < .01$.
Notes: We report the common metric completely standardized solution. The t-values are in parentheses. n.s. = not significant.

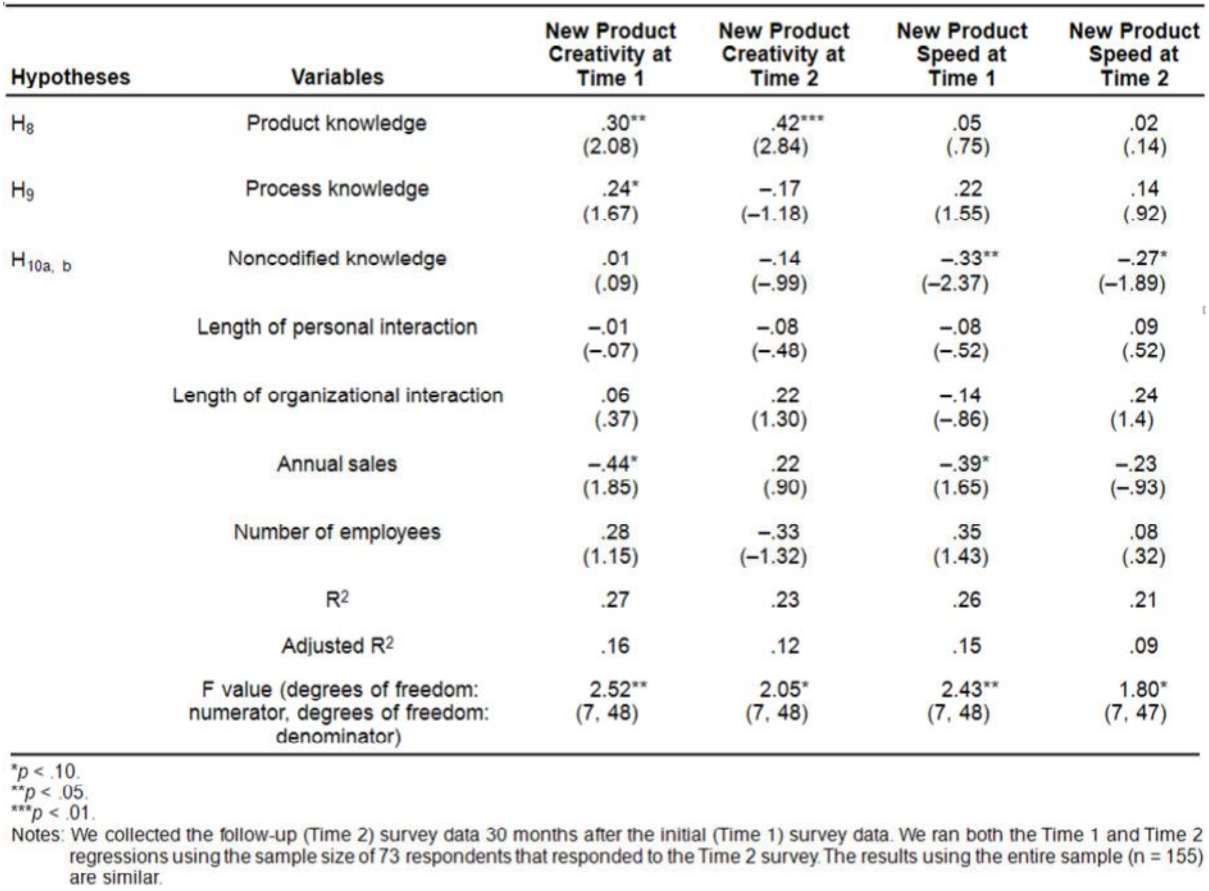
model that allowed these paths to vary freely. This analysis shows that the chi-square difference between the constrained and unconstrained models is statistically significant ($\chi^2(9) = 17.02$, $p < .05$), suggesting the presence of a moderating effect of relational ties.

Our results indicate that geographic distance (i.e., the inverse of proximity) is negatively related to face-to-face communication (b = –.19, p < .05). In effect, as the distance (proximity) between optics organizations increases, their frequency of face-to-face communication decreases (increases). Thus, H_{1a} is supported. We also find that geographic distance does not affect the frequency of e-mail communication between optics organizations (b = .07, not significant [n.s.]), in support of H_{1b}. This suggests that more proximal organizations have a greater tendency to exchange knowledge through face-to-face (but not electronic) communication.

The results from Model 2, however, reveal that the relationship between geographic proximity and face-to-face communication found in Model 1 is limited to firms that have strong ties to their key knowledge providers (strong ties: b = –.32, p < .01; weak ties: b = .20, n.s.). In other words, being in close proximity to key knowledge providers appears to enhance face-to-face contact only among relationally close firms. Model 2 also shows that though geographic proximity may be unrelated to e-mail communication at an overall level, the presence of strong ties appears to encourage physically distant firms to maintain contact through electronic means (strong ties: b = .29, p < .05; weak ties: b = –.15, n.s.).

Next, we examined the effects of communication mode on the form of knowledge acquired. As cluster theorists predict, we find that face-to-face communication is positively related to noncodified (tacit) knowledge acquisition (b =.21, p < .05). We further find that e-mail communication is negatively related to noncodified knowledge acquisition (b = –.15, p < .10). Because our hypothesis (H_3) investigates the relative effects of communication mode on non- codified knowledge acquisition, we conducted a chi-square difference test. The difference between the two models is significant ($\chi^2(1) = 6.21$, p < .001), suggesting that the effect of face-to-face communication is significantly larger than the effect of e-mail communication on noncodified knowledge acquisition. These results provide support for H_3. The results from Model 2 further show that the effects of face-to-face and e-mail communication are magnified in the presence of strong ties (b = .32, p < .01; b = –.19, p <.05).

Table 4
Longitudinal Results



Hypotheses	Variables	New Product Creativity at Time 1	New Product Creativity at Time 2	New Product Speed at Time 1	New Product Speed at Time 2
H_8	Product knowledge	.30** (2.08)	.42*** (2.84)	.05 (.75)	.02 (.14)
H_9	Process knowledge	.24* (1.67)	–.17 (–1.18)	.22 (1.55)	.14 (.92)
$H_{10a,\ b}$	Noncodified knowledge	.01 (.09)	–.14 (–.99)	–.33** (–2.37)	–.27* (–1.89)
	Length of personal interaction	–.01 (–.07)	–.08 (–.48)	–.08 (–.52)	.09 (.52)
	Length of organizational interaction	.06 (.37)	.22 (1.30)	–.14 (–.86)	.24 (1.4)
	Annual sales	–.44* (1.85)	.22 (.90)	–.39* (1.65)	–.23 (–.93)
	Number of employees	.28 (1.15)	–.33 (–1.32)	.35 (1.43)	.08 (.32)
	R^2	.27	.23	.26	.21
	Adjusted R^2	.16	.12	.15	.09
	F value (degrees of freedom: numerator, degrees of freedom: denominator)	2.52** (7, 48)	2.05* (7, 48)	2.43** (7, 48)	1.80* (7, 47)

*p < .10.
**p < .05.
***p < .01.

Notes: We collected the follow-up (Time 2) survey data 30 months after the initial (Time 1) survey data. We ran both the Time 1 and Time 2 regressions using the sample size of 73 respondents that responded to the Time 2 survey. The results using the entire sample (n = 155) are similar.

In H_{4a}, we propose that e-mail communication is associated with a greater amount of product knowledge acquisition for firms with strong ties to their knowledge provider. Model 1 indicates that e-mail communication is positively related to product knowledge acquisition for both strong and weak ties (b = .60, p < .01; b = .31, p < .01). A chi- square test comparing a constrained with an unconstrained model shows a significant difference ($\chi^2(1) = 7.45$, p < .01), in support of H_{4a}. In addition, we find that e-mail communication is related to the process knowledge acquisition for strong ties (b = .34, p < .01) but not for weak ties (b = .09, n.s.). These results show that electronic modes of communication, such as e-mail, are positively associated process and product knowledge acquisition when firms have strong relationships with their knowledge providers.

In H_{4b}, we propose that face-to-face communication is associated with a greater amount of process knowledge acquisition for firms with strong ties to their knowledge provider. This hypothesis is not supported; face-to-face communication has no effect on process knowledge for either weak or strong ties (b = .01, n.s.; b = .03, n.s.). More- over, we find that face-to-face communication has a nega- tive effect on the product knowledge acquisition for both strong and weak ties (b = –.39, p < .01; b = –.15, p < .10).

Next, we examined the impact of knowledge content and form on new product outcomes. As we predicted, prod- uct knowledge acquisition is more strongly associated with greater new product creativity (b = .33, p < .01) than is process knowledge acquisition (b = .16, p < .05). A chi- square test in which we allowed the effect of product knowledge on new product creativity to vary compared with one in which we constrained it reveals a significant differ- ence ($\chi^2(1) = 6.31$, p < .01), in support of H_5. We also find that process knowledge acquisition is more strongly associated with accelerated speed of new product development (b = .20, p < .05) than is product knowledge acquisition (b =–.03, n.s.), in support of H_6. However, the results do not support H_7, which predicts that noncodified (tacit) knowl- edge enhances creativity (b = .05, n.s.) and slows down development speed (b = –.12, n.s.). This suggests that the type of content acquired from knowledge providers is more strongly associated with new product outcomes than is the form of knowledge acquired.

Finally, Model 2 shows that the positive linkages between both product knowledge (strong ties: b = .46, p <.01; weak ties: b = .04, n.s.) and process knowledge (strong ties: b = .21, p < .01; weak ties: b = .12, n.s.) and new prod- uct creativity are limited to firms with strong ties to their knowledge providers. Thus, it appears that firms that acquire knowledge from weakly tied providers are unable or unwilling to use this knowledge to develop more creative new products.

Model 3 (competing model)

Our specification of relational ties as (1) unrelated to geo- graphic proximity and (2) a moderator of the effect of communication frequency on knowledge acquisition represents a dramatic departure from the way that cluster theory depicts this construct. Specifically, cluster theorists argue that relational ties are a direct outcome of geographic proximity and have a direct influence on knowledge acquisition (Porter 1998b; Rosenfeld 1997).

To test this alternative theoretical perspective explicitly, we specified a competing model that was identical to Model 1 except that (1) we specified a path between geographic proximity and relational tie strength and (2) we removed the moderating paths of relational tie strength between communication mode and knowledge type. In effect, this competing model specifies relational tie strength as a mediator rather than a moderator of the effect of geographic proximity on higher-level cluster outcomes. The results indicate that this alternative model is largely inferior to our hypothesized model; its fit statistics (CFI = .87, NNFI = .86, RMSEA = .12, and SRMR = .15) are weaker than those of Model 1. Moreover, this model revealed that the path between geographic distance and relationship tie strength is not significant (b = –.04, n.s.). These results not only pro- vide strong support for H_2 but also offer significant validity to our moderating model of relational tie strength.

Test of longitudinal hypotheses

We examined the longitudinal effect of knowledge form and content on new product development outcomes by specifying two regression models. In both models, the measures of noncodified knowledge, process knowledge, and product knowledge from our initial survey were the independent variables. The dependent variables were our follow-up measures of new product creativity and development speed that we collected 30 months later. As a baseline comparison, we also specified two models that used the same independent variables, but we used the measures of creativity and speed from our initial survey as the dependent variables. As Table 4 shows, the effect of product knowledge on new product creativity is stronger at Time 2 (b = .42, p < .01) than Time 1 (b = .30, p < .05), and this difference is significant (p <.05). In contrast, process knowledge is unrelated to new product development speed at both Time 1 (b = .22, n.s) and Time 2 (b = .14, n.s.). Finally, noncodified knowledge is unrelated to creativity at both Time 1 (b = .01, n.s.) and Time 2 (b = –.14, n.s.) and is negatively related to new product development speed at both Time 1 (b = –.33, p <.05) and Time 2 (b = –.27, p < .10). This difference is not significant. Collectively, these results support H_8 but not H_9 or H_{10}.

DISCUSSION

Our research paints a portrait of the role of geographic distance in new product development that is markedly different from that offered by the traditional views of industry clusters and marketing strategy. Specifically, our results show that (1) geographic proximity is related to face-to-face communication but is unrelated to relational ties, (2) relational ties moderate several linkages in the path between geographic proximity and new product development, (3) face- to-face communication is less effective than electronic communication as a means of knowledge acquisition, and (4) knowledge content has a greater effect on new product development than knowledge form. In combination, this set of results is rather surprising when it is juxtaposed with extant theory on industry clusters and marketing strategy, and it offers several insights into the relationship between geographic proximity and new product development.

Theoretical implications

At first glance, our results appear to suggest that distance still matters. The results of both Model 1 and Model 2 show that firms located in closer physical proximity engage in more frequent face-to-face contact. However, our analysis also reveals that geographic proximity is unrelated to the presence of strong relational ties between knowledge providers and recipients. According to cluster scholars such as Saxenian (1994, p. 104), “there is little doubt that geographic proximity fosters the frequent interaction and personal trust needed to maintain these relationships.” However, our results question the generalizability of such assertions.

It appears that even for firms located in close physical proximity, relational ties must be nurtured and cannot be taken for granted. As organizational scholars observe, firms need to consider both geographic closeness and relational closeness in understanding interfirm behavior (Ghemawat 2001). Our results support and enrich this observation by showing that relational ties are a key moderator for nearly every path in the chain that links geographic proximity to new product development. In summary, nearly all the effects of geographic proximity depend on strong relational ties.

Another widely held assumption among both cluster theorists and knowledge scholars is the necessity of face-to- face contact for the transfer of noncodified (tacit) knowledge. Although our results do not wholly refute such claims, they add some necessary refinement by showing that though face-to-face communication may facilitate the transfer of tacit forms of knowledge, its value in transferring the content of knowledge may be matched or exceeded by other forms of communication, such as e-mail. As Table 3 shows, both process and product knowledge content are critical to new product development because product knowledge enhances new product creativity and process knowledge enhances new product development speed. Our longitudinal data show that knowledge in noncodified form has no effect on new product creativity and hampers new product development speed. Thus, our findings suggest that e-mail and other means of electronic communication are more critical to new product development than is frequent face-to-face contact with external knowledge providers.

Recent research on virtual teams indicates that people can work effectively together without ever meeting in per- son (Cummings 2004; Majchrzak et al. 2004). Thus, e-mail and other forms of electronic communication may be attractive from an efficiency standpoint, regardless of geographic distance, because knowledge seekers may be willing to trade off the richness of face-to-face contact for the timeliness and low cost of an e-mail message. The knowledge benefits of e-mail provide further support for those heralding the "death of distance" and advocates of virtual technologies in general.

Two of our most surprising findings are that face-to-face communication is unrelated to process knowledge acquisition, even when there are strong relational ties with the knowledge provider (contrary to H_{4b}), and that it is negatively related to product knowledge acquisition (see Table 3). How can this be? In an attempt to answer this question, we conducted follow-up interviews with a few of our respondents. These interviews revealed three possible explanations. First, it appears that face-to-face communication with knowledge providers occurs mainly at the start and end of a project. Thus, the bulk of communication during the active R&D and knowledge acquisition phase of a project takes place at a distance. Second, respondents noted the generally unproductive nature of face-to-face meetings in a new product development context, which can apparently even be counterproductive. Third, they suggested that a high level of face-to-face contact could be a sign of a troubled relationship (i.e., one in which little exchange of product knowledge takes place). These possibilities lend further support to the primacy of e-mail as a means to acquire relevant new product-related knowledge.

Managerial implications

High-tech firms that want to enhance their new product development outcomes can draw several insights from our research. First, in contrast with the recommendations of cluster advocates about the importance of geographic proximity, our results suggest that there is no magic that stems automatically from being located near other firms or research institutions in the same industry. Instead, a firm must first develop strong relationships with key knowledge providers to gain access to knowledge, regardless of whether these organizations are near or far. In the absence of close relationships, simply being located in close physical proximity to a knowledge provider does not lead to enhanced communication, improved knowledge acquisition, or better new product outcomes. Geographic proximity may offer an opportunity for relationship development, but this opportunity must be acted on to provide benefits. Therefore, a key managerial priority should be to develop and nurture relationships with potential knowledge providers regardless of their physical location.

Second, after firms establish close relations (at any distance), e-mail can be an effective and efficient means for acquiring both product and process knowledge. As we previously noted, some of our respondents revealed that the socially laden nature of face-to-face meetings can actually be counterproductive. In contrast, e-mail appears to help focus communication on the business at hand, thus resulting in more effective transfer of knowledge that is useful for new product development. The relatively impersonal nature of e-mail may provide added efficiency and clarity by avoiding the symbolic and social barriers that often accompany face-to-face interactions (Durrance 1998; Trevino, Lengel, and Daft 1987). This efficiency advantage of electronic communication should further increase as instant messaging and other interactive technologies become more widely used.

Limitations and future research directions

Our conceptualization and measurement

assume that face- to-face communication enables a rich and interactive exchange of information in real time, whereas e-mail communication is leaner, less interactive, and off-line in nature. This represents an important limitation of our current study; richness is not only inherent in a communication medium but also dependent on contextual factors such as the nature of interactions between the sender and the receiver and the meanings ascribed to them (Lee 1994). Further research could add value by exploring the nuances of these modes of communication in the context of new product development.

In this study, we focused on one important aspect of tacit knowledge: the degree of tacitness (i.e., noncodification) of information acquired from the knowledge provider; however, this study did not directly assess other aspects, such as the absolute quantity of information acquired in tacit form. Because e-mail communication in our sample was more frequent than face-to-face meetings, the (unmeasured) amount of tacit information acquired may have been small compared with the amount of codified information received. Different respondent interpretations of this measure may have led to the underreporting of the tacitness of information acquired and perhaps may have contributed to the nonsignificant effects of tacit knowledge on new product creativity and development speed, contrary to our predictions in H_7 and H_{10}.

Another limitation of our work is its focus on optics-related firms. Although our sample covers applications in diverse product subcategories, a study that covers a broader spectrum of industries would enable researchers to test the generalizability of our findings. Perhaps geographic proximity plays a more important role in the establishment of relational ties and the development of new products in lower-technology industries, such as furniture or textile manufacturing.

Further research could also add value by expanding and enriching our measures of new product outcomes. Our use of survey self-reports of new product creativity and speed provides snapshots of these processes at individual times. It would be valuable to supplement these snapshots with either ethnographic accounts of the role of geographic proximity in new product development as these processes unfold in real time or more precise accounts of proximity's impact on actual (rather than perceived) new product outcomes. Our examination of the benefits of geographic proximity is also limited by our focus on knowledge acquisition. Further research should examine other potential benefits of being located near other organizations in the same industry, such as access to a ready supply of qualified workers and the prestige of being a member of a well-known cluster.

APENDIX MEASURES

Mode of communication (frequency)

We adapted the measure for mode of communication from the work of Hansen (1999) and Mohr, Fisher, and Nevin (1996). We measured it on a five-point scale ranging from 1 ("less than once a week") to 5 ("more than once a day").

1. Face-to-face: Over the past six months, how many times during the average workweek did you personally communicate directly with scientists, engineers, or technical workers from this organization in person?
2. E-mail: Over the past six months, how many times during the average workweek did you personally communicate directly with scientists, engineers, or technical workers from this organization by e-mail?

Tacit knowledge form

We adapted the measure for tacit knowledge from the work of Hansen (1999). We measured it on a seven-point scale.

1. Considering all the types of technical information that you received from this organization (as indicated on the previous page), how well documented was this information? (reversed) (1 = "it was not well documented," 4 = "it

was somewhat well documented," and 7 = "it was very well documented")

2. How much of this technical information was thoroughly explained to your firm in writing (i.e., written reports, manuals, faxes, e-mails, etc.)? (reversed) (1 = "none of it was," 4 = "half of it was," and 7 = "all of it was")
3. Overall, how would you describe the type of technical information that you acquired from this organization? (1 = "mainly formal reports, manuals, documents, and so forth," 4 = "half know-how and half reports and documents," and 7 = "mainly informal practical know-how, tricks of the trade")

Process knowledge

We adapted the measure for process knowledge from the work of Rindfleisch and Moorman (2001). We measured it on a seven-point scale ranging from 1 ("low amount") to 7 ("high amount").

Please rate the amount of new product-related informa- tion that your firm has acquired from this organization over the past six months in the following areas:

1. Information about new manufacturing processes
2. Insights into new ways to approach product development
3. Information about new ways of combining manufacturing activities
4. Insights about key tasks involved in the production process
5. Insights into new ways to streamline existing manufacturing processes

Product knowledge

We adapted the measure for product knowledge from the work of Rindfleisch and Moorman (2001). We measured it on a seven-point scale ranging from 1 ("low amount") to 7 ("high amount").

Please rate the amount of new product-related informa- tion that your firm has acquired from this organization over the past six months in the following areas:

1. Information about R&D projects conducted outside your firm
2. Research findings related to new product development
3. Information about end-user requirements
4. Information about competitors' technology

New product creativity

We adapted the measure for new product creativity from the work of Rindfleisch and Moorman (2001). We measured it on a seven-point semantic differential scale.

Please circle the degree to which each of the following items provides an accurate description of this new product development project over the past six months:

1. Very ordinary for our industry/very novel for our industry
2. Not offering new ideas to our industry/offering new ideas to our industry
3. Not creative/creative
4. Uninteresting/interesting
5. Not capable of generating ideas for other products/capable of generating ideas for other products
6. Not promoting fresh thinking/promoting fresh thinking

Speed of new product development

We adapted the measure for speed of new product development from the work of Rindfleisch and Moorman (2001). We measured it on a seven-point semantic differential scale.

Please circle the degree to which each of the following items provides an accurate description of this new product development project over the past six months:

1. Far behind our project timeline/far ahead of our project timeline
2. Slower than the industry norm/faster than the industry norm
3. Much slower than we expected/much faster than we expected
4. Slower than our typical product development time/faster than our

typical product development time

Relational tie strength

We adapted the measure for relational tie strength from the work of Rindfleisch and Moorman (2001). We measured it on a seven-point scale ranging from 1 ("strongly disagree") to 7 ("strongly agree").

1. We feel indebted to this organization for what they have done for us.
2. Our interactions with this organization can be defined as "mutually gratifying".
3. Maintaining a long-term relationship with this organization is important to us.
4. Our business relationship with this organization could be described as "cooperative" rather than an "arm's-length" relationship.
5. We expect to be interacting with this organization far into the future.

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Acknowledgement: Reprinted with permission from the Journal of Marketing, published by the American Marketing Association, 2005 69(4): 44 – 60.

Investing Niche wine marketing in New Zealand

P. Woodfield
Lecturer
School of Management and Entrepreneurship Unitec
New Zealand
pwoodfield@unitec.ac.nz

P. Nel
School of Management and Entrepreneurship
Unitec New Zealand

ABSTRACT

The New Zealand wine industry has been, and continues to go through rapid growth since the early 1990's. The industry needed to consider how it administered this growth and presents itself to the local and world markets. As a result, New Zealand Winegrowers has been established, as a joint initiative of the New Zealand Grape Growers Council and the Wine Institute of New Zealand, to bring the industry under "one roof', and to bring the "New Zealand Wine" brand to the attention of a global market. The industry is at a point where many of New Zealand's oldest and best-known wineries have merged with, or have been purchased by, overseas conglomerates. Empirical research was executed to gauge the sentiments of the market as to the way forward.

The results of the research and the conclusions reviews the potential for New Zealand's small and medium sized enterprise (SME) wineries to have successful cooperative marketing practices in the future. An outcome is a recent development in the New Zealand wine industry, the so-called 'Family of 12', made up of a group of winemakers who have combined their marketers in an international marketing push. The conclusions and recommendations may provide some inputs for other Southern hemisphere countries like South Africa, Australia and Chile to deal with increased marketing competition.

Keywords: wine, marketing, cooperation, entrepreneurship, marketing channels

This ruticle presents an analysis and suggestions for the marketing possibilities and the potential for similar sized wineties in New Zealand. Because wine is distinctive to a wine1y and branded as such, there is a tendency to isolate marketing ''in-house", and to reject cooperation within the industiy. However, there ru·e examples of cooperation, such as wine tourism and wine clusters. Fmthe1more medimn sized wineries tend to see their next stage of growth to be merging with, or raising finance from, atl outside pa1tner.

The New Zealand wine industiy was dominated for years by family-owned wineties, atld these founding families (usually of Meditenru1ean 01igin) can be identified as the forefathers of this rapidly growing indusuy. Wine making families in New Zealand can be u·acked back as far as the early Europeru1 settlers and staited in 1819 in the N01th Island. The industiy progressed through the anival of a number of Meditenaneatl families from Lebanon, Croatia, Yugoslavia and Spain, between the late 1800's and World Wru· Two. These families remain some of the largest names in the indusu-y today, although mru1y more wineries joined the ranks during an explosion of wineries throughout the 1990's, and increasing nmnbers are still a feature in the present day.

According to Benson-Rea, Roderick & Caitwright (2003), the New Zealand wine indust1y is cmTently in rapid expansion, a phenomenon which has been dtiven by the rapid development of export markets for high quality wines. Inevitably, to meet this growing demand, there is a need for high production. In mru·ket-driven environmental circumstances such as these, Benson-Rea et a1. (2003) fmther notes that factors such as innovation, historical background, institutional and social linkages will continue to have significant influence over the success of the industiy. In addition, the authors emphasise the imp01tance of coordination and cooperation between

wineries, for the development of both the industry as a whole and the individual firms in it.

The terms used in the wine industry to differentiate the history of wine are "old world" and "new world", with the split between the two being based on northern (old) and southern (new) hemispheres. Thus, although North America is an exception to the geographical rule, the "old world" wine industry is based on northern hemisphere production in Europe and parts of the eastern Mediterranean. The wine industry has had shifts in demand due to the shifts in consumer tastes, especially in "old world" countries, and increasing attention is now being paid to the activities of "new world" producers. Southern Hemisphere wine growers have made huge progress to be worthy competitors to the Northern Hemisphere. Today many niche wine producers and wine making has developed, which has accompanying marketing complications, but simultaneously providing opportunities to penetrate new markets on a global scale. This is particularly true because many beer drinking nations, particularly females in these markets have switched to wine as the preferred beverage for all occasions. In terms of the size of the New Zealand wine industry compared to other southern hemisphere wine industries, New Zealand is small. Figure 1 shows the total vineyard area and the total volume of wine produced for each selected country New Zealand could be a good industry for other southern hemisphere industries to observe for niche marketing, especially with recent extensive growth in the industry

The wine trade in New Zealand has grown some 300% in the space of a decade, with the number of wineries more than doubling in that time. The industry's export value in 2003 is nearly six times that in 1993 (New Zealand Winegrowers, 2003). To a large extent, this growth was predicted, and entities were established to manage it. For example, in 2002, 'New Zealand Winegrowers' was established as a joint initiative of the New Zealand Grape Growers Council, to represent the interests of New Zealand's independent grape growers. In addition, the Wine Institute of New Zealand was developed to represent New Zealand wineries, (New Zealand Winegrowers, 2004). Out of this alliance, Sustainable Winegrowing New Zealand (SWNZ) evolved, in recognition of a need for environmentally focussed vineyard practices. The same applies to countries like South Africa where Stellenbosch Farmers Winery and others were forced to do innovative wine marking as competition increased.

After establishing industry initiatives to sustain growth, there is then the question of how to market a product that faces increased competition both domestically and internationally. There is a well-reported glut in the global wine market, which will put pressure on New Zealand wines if they do not present themselves as outstanding. In saying this, global export sales trends in New Zealand wines are predicted to increase rapidly by another 300% over the next 5 years (New Zealand Winegrowers, 2003). Competitive marketing is more important now than it has ever been.

Figure 1
Southern hemisphere wine industry comparison

Industry	Area ('000 hectare)*	Volume ('000,000 litres)
South Africa	126	593.1 (2005)**
Australia	164	1,401.1 (2002)***
Chile	111	570 (2001)****
New Zealand	18	119.2 (2004)*****

Source:
*Australian Commodities - Wine Outlook 2005 (http://www.abareeconomics.com/)
**Wines of South Africa statistics (http://www.wosa.co.za/)
***Australian Wine & Brandy statistics (https://www.awbc.com.au/)
**** Winebiz (http://www.winebiz.com.au/)
*****New Zealand Wine statistics (http://www.nzwine.com/)

The authors use the term "cooperation" to encompass any partnership, merger, joint venture, or strategic alliance between parties in this article. Cooperation is an important vehicle for combining marketing practices between small to medium sized wineries in New Zealand and is explored in more detail elsewhere in this article.

PURPOSE AND OBJECTIVES

The purpose of this article is outlined in terms of the growth and interest in the New Zealand wine industry and its products. The following needs noting about the New Zealand wine industry. Firstly, some elements are unique to the industry, for example, the rapid growth and the number of boutique wineries; secondly, the merging of wineries assessed; and thirdly, factors are listed, which encapsulates the marketing function and the potential for SME wineries to cooperate.

Concern was expressed about the future of New Zealand wine, more specifically in terms of small and medium sized enterprise (SME) wine makers' ability to market their wines and compete internationally against the larger New Zealand wineries. The discussion led to the identification of several elements that are unique to the wine industry. For example, the wine industry has traditionally been dominated by family wineries that have been able to lower their overheads with an "all hands on deck" approach to building the business. In more recent times, lifestyle opportunists or entrepreneurs who have identified a growing wine market and a strong demand for New Zealand wine in particular have started new wineries.

With increasing interest in New Zealand wine, and the entry of new producers into the New Zealand wine industry, there is more competition between wineries to market their products. As large firms have consolidated they have become more cost effective, leaving small to medium sized wineries to compete against monolith corporations with more buying power, greater economies of scale, more sophisticated knowledge of research and development techniques, and well developed vertical integration into more self sufficient and robust entities. (Bretherton, 2004). However, the disadvantages that face large wineries are that they can be slow to move when research and development or innovation calls for change in their practices. In addition, when wineries are forced to merge with other wineries, they lose their independence and sometimes their status, as a wholly New Zealand owned enterprise.

A glut in the international market for wine has led to an investigation into the future of the New Zealand wine industry, specifically for medium sized firms. Medium sized firms are classed as Category Two according to New Zealand Winegrowers, and this category comprised 30 wineries at year ending June 2002 (New Zealand Winegrowers, 2003). This article is intended to scope out how these wineries' market their products at present, and to examine the positive and negative effects of marketing in cooperation with each other. As such, the purpose of the article is based on two objectives:

- Analyse the rapid growth of the New Zealand wine market and the need to align business practices to match this growth.
- Investigate the potential for cooperation between wineries for marketing purposes.

These objectives lead into the problem being investigated where cooperative marking will be investigated in more depth.

PROBLEM INVESTIGATED

The problem being investigated is discussed primarily in terms of the New Zealand wine industry. First, the perceived marketing terminology specific to New Zealand will be reviewed; secondly, factors such as family businesses versus entrepreneurial ventures will be discussed in terms of cooperative wine marketing; and thirdly, the intangible characteristics of wine is discussed.

According to Gregan (2004a), New Zealand Winegrowers have indicated a strong preference to promote the "New Zealand Wine" brand, an approach which tends to look inwards to the New Zealand wine industry's need for quality maintenance rather than looking outwards to the needs of customers. The industry also needs to sell New Zealand before it can sell individual brands of New Zealand wine, although it is acknowledged that the question to be asked is whether there is a need to shift from being "allocators" of wine to becoming "marketers" of wine (Gregan, 2004b).

Marketing, as opposed to merely selling, has been described as a matching process, and the implications of that matching, as it directly applies to the wine industry, are clearly portrayed in figure 2. Spawton (1991) advocates the marketing approach as superior to the selling approach, defining the wine marketing needs as follows:

- An understanding of the market place
- The development of marketing strategies both for corporate growth and competitive advantage
- Marketing planning
- Communication
- Coordination
- The management of the branded assets of the wine company.

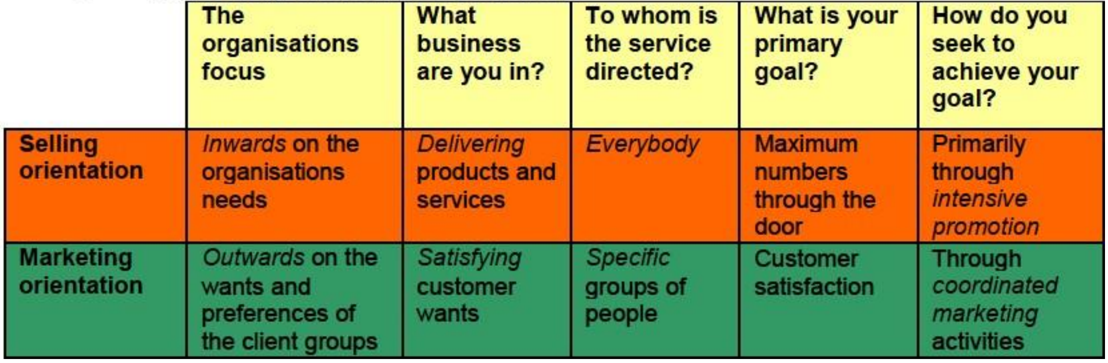
These needs can be addressed in several ways. For example, Benson-Rea et al. (2003) note that there is a need for the New Zealand wine industry to understand demand structures in its international markets and to have the ability to control supply to maintain price premiums. This could be done through closer cooperation between wineries on a micro scale, as small to medium sized wineries lack the economies of scale that the oligopolies have. There are some consequential advantages available to smaller players in the wine industry through an exclusivity of branding and taste preferences. In addition, Benson-Rea et al. confirms the need to create better marketing effectiveness with six trends that need to be considered:

- Changing patterns of increased production
- Shifting patterns of demand
- Increasing retail power
- Increasing competition between countries
- Increasing importance of branding
- Changing of wine industry structures

These themes emphasise the need to consider marketing practices that align with the rapid growth of the wine industry.

With family wineries there can be an issue because the family's name or brand can all too easily be exploited for competitive advantage (Getz et al., 2004), and the association a family brand may have with quality could be damaged if it is associated with other lower quality products. In the wine industry there is a sense of pride in the product, which is self-distinctive to each winery and may be as much of a reflection of the wines' branding as the process and geographical location. The influence of the founder or pioneer may determine how much they will allow "outsiders" to be involved in the business (Kets de Vries, 1993, pp59-71), in relation to maintaining an exclusively family flavour, and a key outcome of this influence may well be the extent to which marketing capabilities are developed in cooperation with others.

Figure 2
The selling and marketing orientations contrasted



	The organisations focus	What business are you in?	To whom is the service directed?	What is your primary goal?	How do you seek to achieve your goal?
Selling orientation	*Inwards* on the organisations needs	*Delivering* products and services	*Everybody*	Maximum numbers through the door	Primarily through *intensive promotion*
Marketing orientation	*Outwards* on the wants and preferences of the client groups	*Satisfying* customer wants	*Specific* groups of people	Customer satisfaction	Through *coordinated marketing* activities

Source: (Spawton, 1991, p10)

Getz et al. (2004, pp153-160) argue that the only way for family businesses to overcome limitations in size and resource is to engage in cooperative activity of some description, such as "product clubs" or marketing consortia. Some of the advantages of cooperative marketing include:

- Networking
- Achieving greater economies of scale
- Obtaining professional advice
- Access to better technology
- Support for training and education
- Pooling of resources

However, for entrepreneurs to "cooperate" is almost an oxymoron because of the strongly individualistic nature of an entrepreneur. To cooperate, or form alliances with anyone else, means taking into account a collectivistic approach and the need to consider sharing information that would not normally be on the entrepreneurial agenda. On the other hand, it remains possible that family businesses already have a collectivistic nature and may therefore lean towards a cooperative marketing strategy more readily than "entrepreneurial" wineries.

With the New Zealand wine industry's product being effectively promoted at a national level, winemakers now need to consider how they enter other markets and whether they do this on an individual winery basis; merging with other wineries or those with a common interest somewhere along the value chain; and whether this merging occurs through strategic alliances, or joint ventures, or cooperative networking (Bretherton, 2004, Lewis, 2003, Beverland and Bretherton, 1998, Bretherton and Chaston, 2004).

Brown & Butler (1995, p57) state that the wine industry poses additional problems to other industries because it is regulated and capital intensive, with long lead times for planting grapes, production, and selling the wine. This can hamper the progress of strategic shifts and response to new information. This suggests that any move towards cooperation may be more difficult than, say, the cooperation between winemaker and grape grower. As it stands, NZWG has proven that, at a national level, cooperation can be accomplished – the next stage is to achieve the same outcome at a lower level.
One potential form of cooperation in the future could be with vineyards providing grapes for a regional cooperative. An example of this is Cooperatives of Samos, Greece, which is reported to have revived the industry on the island of Samos (Greekwinemakers.com, 2004). The cooperative is responsible for the island's wine production, sales and marketing, and is made up of 26 sub-cooperatives; also known as wine growing villages (Athenee Importers, 2004). The story of the formation of the cooperative is one of gaining recognition for their prominent grape variety, Muscat, and later to gain recognition for the region's wine as "superior quality", an appellation that is usually reserved for French wine (All about Greek Wine, 2004).

Until 1934, when the Greek Government issued a presidential mandate decreeing that all wine that carried the name of "Samos" would be produced from Muscat, the French monopolised the distribution of their wine. The solution to this was to form a cooperative, made up of growers, which bought all the fruit produced on the island. This resulted in more control of quality and the coordinated marketing of the wine – it also established "Samos" as a name synonymous with the Muscat varietal. It can be deduced from this example of a Greek cooperative, that New Zealand could accomplish forming regional cooperatives, which could produce a similar recognisable regional variety of their own. This could also be the case elsewhere in the world to accommodate niche market opportunities.

In order to view cooperation as a distinct and separate issue to consider, there is a need to examine the differences between various forms of cooperation. The following are possibilities:

- A merger which is the form of cooperation where two become one.
- A strategic alliance which is the coming together of two (or more) entities with complementary skills to achieve competitive advantage, usually associated with vertical integration, and used for performing many value chain functions

which a single organisation may not possess (Bretherton, 2004).
- Joint ventures which imply that a new entity is created, where all parties have a share of control of that new entity.
- Network development is associated with institutes, associations and societies which bring together like-minded people who cooperate informally in a networking situation (Simpson, 2003).

Although the wine industry clearly demands specialist knowledge to make and trade wine, wine marketing has some time ago been described as the ticket to future prosperity (Spawton, 1991, pp6-48) - there is therefore a growing recognition of marketing importance as an essential management tool for the industry.

Another problem faced in the wine industry is the intangibility of the product. On the one hand wine is tangible in terms of our senses, for example smell and taste, but the quality, status and knowledge of the product are all intangible characteristics that need to be communicated to the consumer. According to, (Edwards, 1989, p14) consumers rely upon testimonials from peers and friends through word-of-mouth and the cultivation of a wines image through publicity and public relations. To market wine effectively, the economy of scale of wineries plays an important part. This leads to an inevitable need for cooperation within the industry.

RESEARCH METHODOLOGY

The body of knowledge around marketing in the wine industry is fairly general, and could benefit from further analysis, discussion and recommendations. In this light, the current research has been exploratory and lends itself well to find some answers to the marketing of wine, which could be of value to New Zealand and the international community as well.

The research methodology entails secondary, quantitative and qualitative data collection; and data analysis, including an outline of the survey and programs used to carry out the analysis. This is followed by the results section, which is supported by graphs and tables, and concludes with an analysis of the results.

This mixed method approach is well suited to the research because it characterises the industry dynamics and preferred style of reporting. The quantitative approach is seen as a structured and systematic and replicable way of gaining data on the wine industry. As such, the qualitative approach emphasises various themes arising from the course of study and represents a narrative form of discussion adding to the subjective relationships in the research.

Secondary available data has been largely quantitative, based on volume of wine and tonnages of grapes; financial turnover; and area planted with vines. Using these sources of secondary data, quantitative study into the management and marketing aspects of the wineries is carried out. The data concerning the overall market size, volume of sales, and quantity of product was found through the Department of Statistics, Trade and Enterprise New Zealand, and New Zealand Winegrowers.

The quantitative methodology is based on responses sought from a universe comprising Category One and Two wineries according to New Zealand Winegrowers. There are 421 Category One wineries in New Zealand producing less than 200,000 litres of wine, of which every 5th winery was selected to obtain a random sample of 84 wineries. Category Two wineries produce more than 200,000 litres of wine, of which there are 30. All Category two wineries are included as part of the universe from which to obtain the sample. A combined total of 114 wineries from category One and Category Two were surveyed. The survey was conducted in late 2004.

There were 21 (25%) from Category One wineries and 18 suitable candidates (60%) from Category Two wineries.

After the questionnaire was constructed from a review of the literature it was also tested in practice on a small sample of practitioners. This led to further refinements of the questionnaire.

Further to this selection, the wineries were engaged in three stages. Firstly with an introductory fax; secondly with an email including a link to the survey document using SurveyPro software; thirdly, a follow up email thanking those that participated, and offering those that did not carry out the survey another chance to do so. No option was given for a "hard copy" of the questionnaire to be filled out, although if the response rate had been unacceptably low, this stance would have been reviewed to obtain more responses.

The person targeted in each winery was required to possess knowledge of the history, business structure and marketing aspects of the business. This person was, consistently, the proprietor, general manager or marketing manager.

First Stage

An identical preparatory fax was sent out to both Category One and Category Two wineries outlining the following:

- Introduction to the aim of the survey
- Why the survey was being carried out
- How the selection of respondents was conducted
- How long the survey would take
- Intention of circulating anonymously produced results
- A request to ensure an appropriate person completed the survey
- Affirmation of the ease and security of the internet survey
- Instructions of how the survey was to be emailed
- The author's contact details and alternative contact
- Note that the survey was carried out with the knowledge and approval of Unitec New Zealand.

Each fax was individualised to each recipient by name, to encourage a higher response rate, and a screening device was used to prevent other wineries knowing who was included in the survey.

Second Stage

An individualised email was sent providing the following information:

- Acknowledgement that an engagement fax had been sent previously (the original fax was attached to the email)
- The survey web link was provided
- A reference to the nature of the survey was included
- Instructions pertaining to the survey were prescribed
- The author's contact details were provided

Third Stage

A broadcast email thanking the participants was sent out including the following:

- Thank you for the replies
- Reminder of deadline for compiling the data, with another opportunity to carry out the survey offered
- The survey web link was provided
- The author's contact details were provided

The email was sent out with all addresses hidden to maintain anonymity.

The quantitative element of the research was carried out with an online survey using SurveyPro, which was received back anonymously for analysis. The survey contained questions relating to winery ownership; customer focus; marketing; cooperation; and specific information about the history and function of the winery. There were six separate sections in the survey, excluding the introductory and "Survey Complete" pages:

Section A - About Your Organisation (Winery)
Section B - Defining Your Customers
Section C - Marketing Practices with Your Customers
Section D - Measuring Performance
Section E -Views on Marketing
Section F - About You

The main survey questionnaire utilised a six point Likert type scale (1 = Never, 6 = Always) followed by short open-ended questions. This scale was chosen to avoid neutral answers being given. Other questions required answers pertaining to winery size, age, and price range of product and family involvement.

The statistical analysis was canied out to search for correlation between sizes and the period the winery has been established. Data from open-ended questions was transcribed; the content analysed for themes; and those themes incorporated into the discussion section of the dissettation.

A total of 51 responses out of 114 surveys sent (45%) were received, which represents 84 being possible from Category 1 and 30 being possible from Categ01y 2, from the smvey. However, a number of responses were incomplete in some way, and a total of 34 out of 51 complete responses (30%) were used for the fmal analysis. The difference in the number of respondents is reflected for each question is reflected in the analysis of each question.

RESULTS AND DISCUSSION

Several areas were identified as being important factors when analysing the results of

customers in the New Zealand wine industty; secondly, the prop01tion of production being

marketing practices in the industty.

Respondents were asked to identify the winedes' primaty customers in tenns of whom customers are the main focus of marketing activities. It was deduced that the leading primruy customers were disttibutors atld merchants. The results rue summarised as

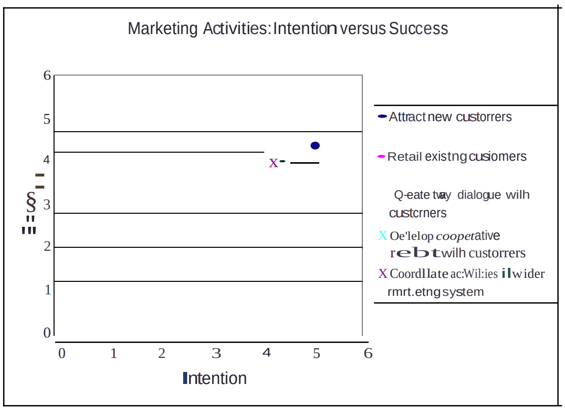
- Expolting (disttibutors, wine merchants) - 45%
- Small scale disttibutors (restaurants, cafes) -24%
- Direct to public (cellru, mail order) - 17%
- Wholesale outlets (Liquor King, Liquorland, etc.) - 7%
- Other (conttact wineries, passive sales) - 7%

A majority of 21 winedes out of 36 (58%) exp01t more than 50% of their product. The most populru international markets for export were the United Kingdom atld the USA. This is supp01tive of what the literature suggests about the significant increase in expo11ing since the 1980's. It was also fom1d that the wineries smveyed produced wine for the higher end of the market, rather than going for volume in the cheaper wines. It can be concluded here that there is an emphasis on good quality product in the New Zealand wine industry, with pdces reflecting this statement.. New Zealand thus competes with other Southem Hemisphere wine producing counttes like South Africa, Chile and Austtalia.

Finding out what the intentions of marketing activities were as opposed to what they felt their marketing activities were successful in, revealed that most wineries believe that their eff01ts to attract new customers have been successful. Figure 3 shows a comparison between the intentions and successes of certain mruketing activities, based on the mean response rate from winedes.

Figure 3

versus Success



Source: (Woodfield, 2005)

When compadng the wineries' intentions versus their successes in mruketing activities, respondents saw attacting, retaining, and developing cooperative relationships and activities to be important, whereas less importance was placed on creating two-way, technology based dialogue with their customers. This would suggest that wineries leaned towruds relationship marketing as opposed to ttansactional mruketing (Chaston, 2000, ppl9-37). Conversely, they felt successful in the areas where their intentions lay, and again did not appear successful in creating two-way, technology based dialogue with their customers. It can be deduced that creating dialogue with their customers is an area that needs to be further explored outside this research report.

Success in retaining customers would suggest that marketing practices are at a sufficient level, but it could be argued that attention needs to be paid to future marketing practices as competition and production increases. With this in mind, respondents were asked what major trends, issues or changes in marketing practice are currently affecting the industry.

There were a variety of answers in relation to major trends, issues and changes in the wine industry, and the effectiveness of marketing practices that are a consequence of these factors. One issue that was raised several times was the level of competition in the industry and the suggestion that continued industry growth is fuelling the competition. On the topic of competitors, the respondents saw wineries of a similar size to them to be their most significant domestic competitors. As far as marketing practices were concerned, most respondents suggested they had changed their marketing practices over the past year, specifically in communication, distribution channels and promotion. It can be deduced that the overriding factor that would improve marketing effectiveness was more intense and more direct communication with customers.

Following on from trends and issues in the industry, respondents were asked whether they had considered cooperative marketing activities with other wineries (other than merging or joint ventures). There was a positive response rate of 77% (23 of 30 respondents). In response to the question whether they expected joint-marketing activities (such as wine tourism clusters and cooperative marketing) to be at a greater level in the future, 81% (25 of 31 respondents) considered that this would be the case.

Having established whether there was interest in cooperative marketing, respondents were asked for the main reason they would engage/are engaging in cooperative marketing with other wineries. The results indicated that the majority of respondents had considered cooperative marketing activities with other wineries. The main reason for engaging in cooperative marketing was to promote wine in their region, creating cost efficiencies and economies of scale. It can be deduced that there is a rising interest in a more local cooperation between wineries as opposed to only nationwide cooperation.

Gregan (2004), the CEO of New Zealand Winegrowers said the question needs to be asked whether the New Zealand wine industry now needs to shift from being “allocators” of wine to becoming “marketers” of wine, and begs the further question of how this can best be done. From this comment, it can be deduced that there is a need in the market for the New Zealand wine industry not to produce copious amounts of wine for allocation to the domestic and world markets, but to define its marketing orientation. This falls in line with Spawton’s (1991, pp8-48) earlier comments regarding “selling” versus “marketing”.

Given that the “New Zealand” brand is currently well positioned in the global wine market, the industry can now work on more informative marketing strategies. The strategy under review in this article is in the form of cooperation between wineries to market their products while maintaining their independence. Cooperation and alliances are nothing new to the industry but, in its maturation, consideration needs to be given to wineries and regions maintaining their individual integrity without becoming part of a conglomerate or merging with various other wineries, only to lose their individuality amongst a myriad of brands.

It can be deduced that there also seems to be a need to further develop regional marketing strategies to meet the needs of individual wineries as the New Zealand wine industry matures.

Marketing activities are the most important function for SME wineries in future. Without selecting compatible markets, wineries would not have the capacity to sell their reported increase in production and could easily be left with substantial surplus stock. Wineries need to carefully manage the following with regard to their marketing, particularly if they are in the same country/hemisphere:

- An understanding of the market place and its likely future demands
- Development of marketing strategies both for corporate growth and competitive advantage
- Marketing planning that aligns with the industry and strategic objectives
- Encouragement of more communication between wineries and between regions
- Coordination of marketing activities
- Management of branded assets to retain product and service quality

Similarly in South Africa the Stellenbosch Farmers Wineries (SFW) operated very successfully in the Stellenbosch area to strengthen individual wine farmers' efforts to enter bigger markets.

Cooperation is an enabler towards identifying and pursuing the major segments in a market. Through cooperation, the volume and variety of product is increased, enabling smaller wineries to compete in markets alongside their larger competitors. In addition to the prospects of cooperation, an important finding in the results of the authors' survey is that wineries see their competitors as those of a similar size to there own. In light of the cooperation discussion, it can be deduced that wineries would cooperate on a regional basis because this would include all categories, and not just similar sized wineries.

A cooperative can be a separately run organisation that caters to the marketing needs of wineries. It can be deduced that the selection of wineries could be based on the following for cooperation purposes as well:

- Variety type (e.g. Chardonnay, Pinot Noir, Sauvignon Blanc)
- Region (e.g. Auckland, Hawkes Bay, Marlborough)
- Similar sized wineries combining for larger economies of scale in the export market.

It is worthy to note that to some extent wineries are coming together to combine their marketing efforts as well. The most recent example is the 'Family of 12', which is made up of marketers from 12 wineries in various regions to intensify marketing efforts (Hendery, 2005).

The question also needs to be asked here whether, given the size of the New Zealand wine industry, is it worth cooperating at another level other than nationally?

CONCLUSION AND RECOMMENDATIONS

Conclusions are focused on the rapid growth of the wine market; and secondly, the potential for cooperation between wineries for marketing purposes to market wine in a niche context.

The rapid growth necessitates a need to review marketing practices in order to combat international competitors.

An integral part of establishing the major trends, issues or changes in marketing practice currently affecting the industry, was to find themes that were raised by survey respondents. It is concluded that the strongest themes, representing over two thirds of respondents, are the following:

- More competitors due to industry growth
- More price competition
- Oversupply of wine to the market

It is concluded that strategies need to be established to allow the industry to maximise the benefits of fair competition, whether that be from the number of competitors entering the market pre-empting an oversupply of wine, or competitive pricing. In addition to these themes, there is also concern regarding the need for higher quality wine and better branding. These themes provided a foundation for a closer examination of marketing practices in New Zealand wineries and the wine industry as a whole.

The question was raised whether there is a need for the New Zealand wine industry to shift from being "allocators" of wine to becoming "marketers" of wine. In response, themes were identified from the author's survey questions, asking whether organisations had changed their marketing practices in the last few years. It is concluded that the strongest themes, representing over two thirds of respondents, are the following:

- No significant change
- Increased communication
- Increase export/positioning focus

The conclusion is that wineries should be strategic in their approach to maintain their position in the market. This is based on respondents' statements that no significant change has been made to their winery's marketing practices. Given that the other strongest themes were increased communication and export/position focus, it can be concluded that some wineries have identified the need to collaborate and assert a global focus for their wineries.

In addition to the marketing practices themes, respondents stated that there was a need for more employment of marketing personnel, and a need to review packaging and branding. Respondents also claimed that they could best improve their organisations' marketing effectiveness through the following conclusive themes representing over two thirds of respondents:

- Better customer communication
- More marketing
- Developing relationships

It can be concluded from these themes that the New Zealand wine industry could benefit from creating an identity through cooperation; improving communication with customers; and developing new and existing relationships in the market. These themes can work hand in hand through cooperative marketing practices.

An analysis of the internal and external environments was carried out, based on the theory and the resulting themes from the authors' survey (figure 3). It can be deduced that New Zealand's wine industry is conducive to strong cooperation in tourism and complimentary products like different types of cheese, but the industry lacks cohesion at a regional level, which weakens their competitive position.

Figure 4
Analysis to determine the need for cooperative marketing in the wine industry

	Strengths	Weaknesses
INTERNAL	• Strong "New Zealand Wine" brand • Popular grape varieties (e.g. Sauvignon Blanc, Pinot Noir, Chardonnay) • Quality wine • Clearly defined regions • Excellent tourism prospects • Excellent complementary cuisine, cheese, etc. • Reputable individual brands • Good industry cohesion • High degree of innovation	• Small industry • Undue reliance on certain brands for export • Lack of regional cohesiveness • Dominant wineries owned off shore • Insufficient knowledge of new technologies
	Opportunities	Threats
EXTERNAL	• Increased exporting • Cooperative regions • Cooperative varieties • Higher quality production	• Increased competition from other emerging countries (e.g. South Africa, Chile, Australia • Reduced export demand • International competition for premium wine categories • Price competition with imported wines • Declining wine consumption

The main concerns that would create better marketing effectiveness were enhanced quality; coordination within regions; and better branding which should be taken note of in the aforementioned analysis resembling the SWOT methodology.

As discussed earlier in this article, the theory suggests trends that create better marketing

The potential for cooperation between wineries was shown through themes presented by survey respondents, when asked for the reasons they would engage, or are engaging, in cooperative marketing with other wineries. It is concluded that the strongest themes, representing over two thirds of respondents, are the following:

- Enhance regional image
- Marketing and promotional cooperation

The conclusion is reached that the marketing function is by definition very close to the customer, and this can make supplier cooperation difficult. However, there are different ways to cooperate in the marketing of wine, and it is evident that an enhanced regional image and cooperative marketing are of importance to New Zealand winemakers. Though most wineries belong to New Zealand Winegrowers, and therefore benefit from the "New Zealand" brand, it appears they need another tier of cooperation. This could be regional, or with wineries of similar characteristics.

It is concluded that there is a genuine trend towards wineries cooperating with each other to boost communication, relationships and image, to counter competition and oversupply in the market. As mentioned earlier, an example of this type of cooperation is the 'Family of 12' wineries who have come together to intensify their marketing efforts. These all coincide with the marketing function and point towards some form of cooperation to give economies of scale in the competitive wine market in New Zealand.

These are alternative solutions to cooperative marketing means are suggested as being the following in a retail context:

effectiveness. It can be concluded that these trends are parallel to the themes that have been identified, and emphasise the need to consider marketing practices that align with the rapid growth of the wine industry. With this conclusion, the next objective is to investigate the potential for cooperation between wineries for marketing purposes.

- Retail selling via boutique type liquor stores might be one of the options to consider
- Concentrate on wine clubs
- On-line selling worldwide
- Regional wine tourism outlets

In terms of the analysis and consolidated information from the literature review and the results of the survey, a further model can be constructed over and above the SWOT model outlined previously. This is discussed below.

Realistically, the resounding conclusion is that wine industry participants see the importance of "working together". It can be deduced that New Zealand Winegrowers was formed with a need to satisfy these needs in the first place and, if they are being raised again, it is time to review the need for another tier of cooperation in the industry.

In order to reconsolidate the industry subsequent to its substantial growth, the following tiers of cooperation are presented as recommendations for New Zealand producers.

- National - As stated earlier, the "New Zealand Wine" brand has received accolades at an international level, which concludes the national branding promotion carried out by NZWG. This promotion will continue using the three categories based on production volume.

- Regional - The next step will be to look at the wine industry according to region (for example, Auckland, Marlborough, Otago, etc.), while retaining the established categories. This tier will serve to promote each region independently, without diluting the recognition of the "New Zealand Wine" brand. The transition will be from "allocating" New Zealand's wine globally, to "marketing" regional wine to the international market.

It is recognised that regional cooperation is occurring at present, albeit disjointedly, through wine tourism clusters and vertical integration, as suggested in the researched literature and results. The rapid growth of the industry leads to the conclusion that it is indeed time to reconsolidate the regions in a similar way to NZWG. To summarise and conclude these findings, figure 5 is a suggested model that would differentiate the New Zealand regions and which could be of value elsewhere in the world as well.

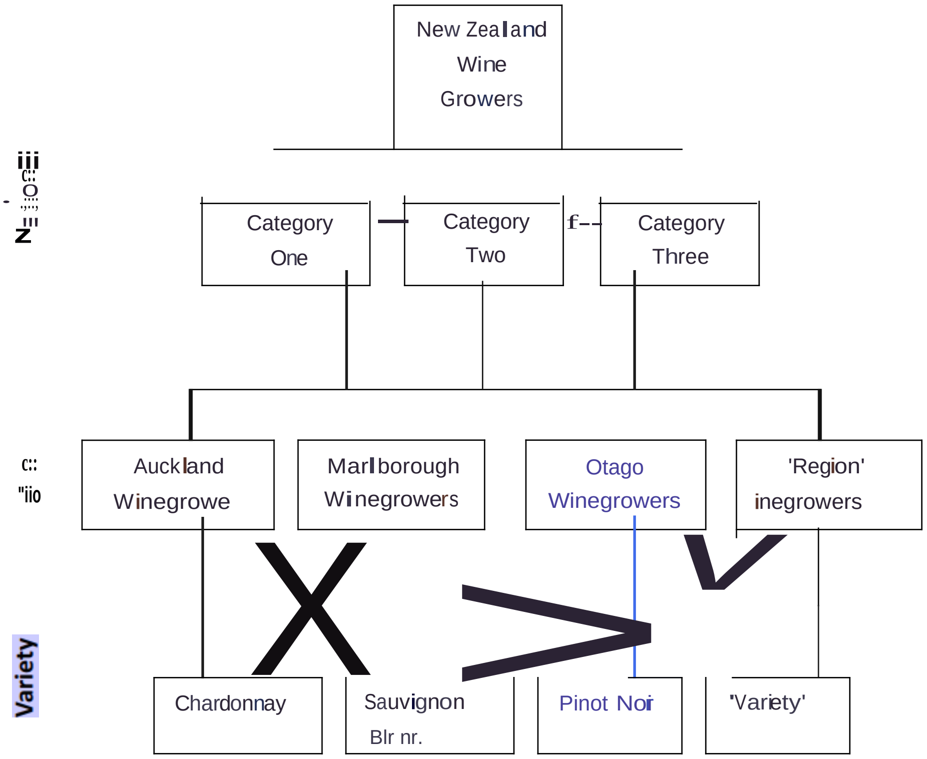
- **Varietal-** Further to regional cooperation, the other distinguishing feature about wine is its variety type. Although there may not be a need to form a cooperative for each grape variety, there can be cooperation for the marketing of, for example, pinot noir as a regional varietal).

To capture the above recommendations, the following model for cooperation and marketing can be utilised to establish better marketing strategies for the wine industry in New Zealand. This model can possibly also be used elsewhere in the world in the Southern Hemisphere in particular, where broadly similar types of wine varieties are produced such as South Africa, Australia and Chile.

Without these tiers there is a potential for "maverick" wine makers to compromise the quality and branding of the New Zealand wine industry. This needs to be avoided because it affects the pricing of the wine product, not to mention the lucrative hospitality and tourism industry. In summary, cooperative marketing is an option for wineries, which are big enough to be taken over but small enough to cooperate with other wineries to market their brands and intensify their economies of scale.

These recommendations are possibly applicable to the southern hemisphere wine producers, such as South Africa, Chile and Australia, to refine their own marketing in order to cooperate in international niche markets.

Figure 5
Regional Cooperative marketing model for New Zealand



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Do Satisfied Customers Buy More? Examining Moderating Influences in a Retailing Context

K. Seiders
Associate Professor of Marketing
Carroll School of Management
Boston College
seiders@bc.edu

G.B. Voss
Associate Professor of Marketing
Department of Business Management
North Carolina State University
gvoss@ncsu.edu

D. Grewal
Chair of e-Commerce and Electronic Business &
Professor of Marketing
Babson College
dgrewal@babson.edu

A.L. Godfrey
Doctoral student
University of Texas
Andrea.godfrey@phd.mccombs.utexas.edu

ABSTRACT

In this research, the authors propose that the relationship between satisfaction and repurchase behavior is moderated by customer, relational, and marketplace characteristics. They further hypothesize that the moderating effects emerge if repurchase is measured as objective behavior but not if it is measured as repurchase intentions. To test for systematic differences in effects, the authors estimate identical models using both longitudinal repurchase measures and survey measures as the dependent variable. The results suggest that the relationship between customer satisfaction and repurchase behavior is contingent on the moderating effects of convenience, competitive intensity, customer involvement, and household income. As the authors predicted, the results are significantly different for self-reported repurchase intentions and objective repurchase behavior. The conceptual framework and empirical findings reinforce the importance of moderating influences and offer new insights that enhance the understanding of what drives repurchase behavior.

Marketing literature consistently identifies customer satisfaction as a key antecedent to loyalty and repurchase, but current knowledge fails to explain fully the prevalence of satisfied customers who defect and dissatisfied customers who do not (Bendapudi and Beny 1997; Ganesh, Arnold, and Reynolds 2000; Jones and Sasser 1995; Keaveney 1995). Although prior research points to several variables that may moderate the satisfaction-repurchase relationship, empirical results are equivocal and difficult to reconcile.

Many empirical studies examining direct and moderated satisfaction–repurchase effects measure repurchase intentions rather than objective repurchase behavior. Studies can produce erroneous inferences if there are significant differences between intentions and subsequent behavior (Bolton 1998; Kamakura *et al.* 2002; Mittal and Kamakura 2001; Morwitz, Steckel, and Gupta 1997) or if common method variance inflates estimates of the association between self-reported satisfaction and intentions (Bolton 1998; Gruen, Summers, and Acito 2000; M01witz and Schmittlein 1992). Satisfaction levels at which customers report a positive intent can differ considerably from those at which customers engage in the corresponding behavior (Mittal and Kamakura 2001). Therefore, additional research is necessary that explicitly examines the extent to which results converge when using repurchase intentions versus objective repurchase behavior as the dependent measure.

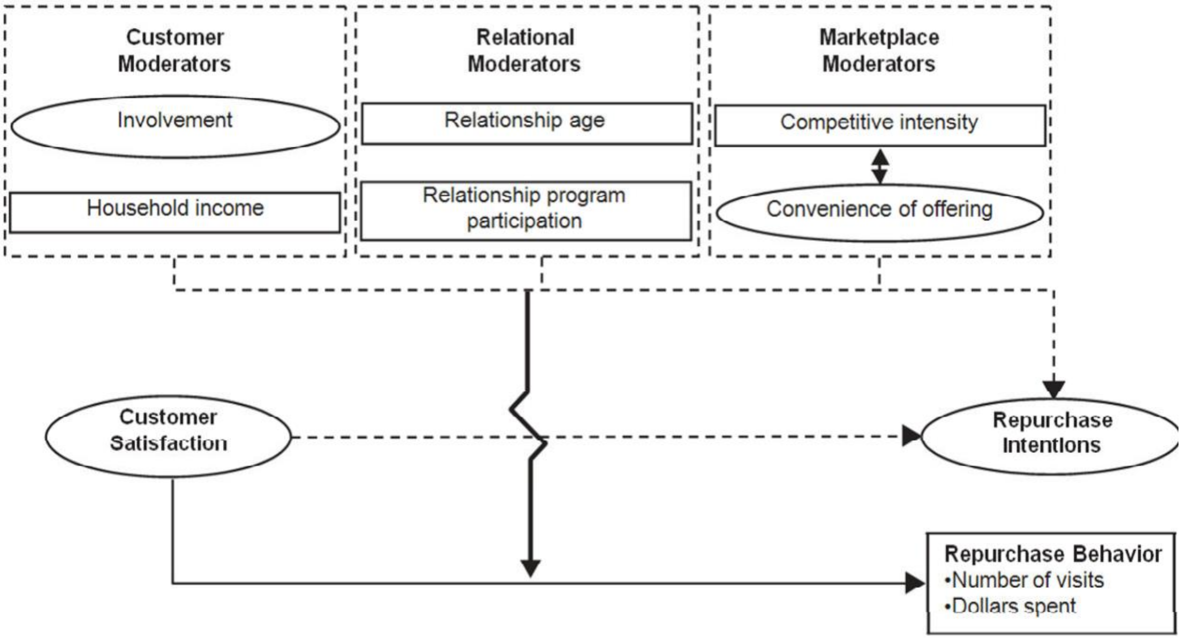
In response to calls for deeper insight into factors that may moderate the satisfaction–repurchase relationship (e.g., Bolton, Lemon, and Verhoef 2004), we propose a conceptual framework that explains why two customers with the same (different) levels of satisfaction engage in different (the same) patterns of repurchase behavior. We use consumer resource allocation theory to support our prediction that, after we control for main effects established in prior research (Anderson and Sullivan 1993; Bolton 1998; Boulding *et al.* 1993; Rust, Zahorik, and Keiningham 1995), customer, relational, and marketplace characteristics moderate the relationship between satisfaction and repurchase behavior but do not moderate the relationship between satisfaction and repurchase intentions. For example, convenience (a marketplace characteristic) conserves customers' time and effort and thereby facilitates a satisfied customer's ability to fulfill his or her intent.

We test the conceptual framework in an understudied retail context that is characterized by low switching costs and comparison shopping behavior. This context is noteworthy because no known research has examined differences in intentions and objective repatronage behavior in a retail shopping category marked by moderate repurchase frequency. Research suggests that the predictive validity of repurchase intentions varies widely from frequently purchased convenience goods to infrequently purchased durables (e.g., Chandon, Morwitz, and Reinartz 2005). In addition, the satisfaction–repurchase relationship can differ significantly between contractual services and discrete, recurring purchases (Lemon, White, and Winer 2002; Reinartz and Kumar 2003), for which switching costs are lower and customers typically are not obligated to give all their business to any one firm (e.g., Rust, Lemon, and Zeithaml 2004). Thus, our research extends current knowledge by capturing the complexity of the satisfaction–repurchase relationship in a context marked by discrete recurring transactions.

CONCEPTUALIZING A MODERATED SATISFACTION – REPURCHASE BEHAVIOUR RELATIONSHIP

In Figure 1, we present a conceptual framework that proposes satisfaction and customer, relational, and marketplace characteristics as antecedents to repurchase intentions and behavior. We conceptualize customer satisfaction as a cumulative, global evaluation based on experience with a firm over time (Homburg, Koschate, and Hoyer 2005). Repurchase intentions represent the customer's self-reported likelihood of engaging in future repurchase behavior, whereas repurchase behavior is the objectively observed level of repurchase activity. The default expectation is that satisfaction positively influences both repurchase intentions and behavior, and we offer no formal hypothesis for this well-established relationship.

Figure 1:
A framework of examining moderators of the relationship between customer satisfaction and repurchase



The dotted lines in Figure 1 capture direct relationships that have been previously established in the literature (e.g., Beatty and Smith 1987; Bolton, Kannan, and Bramlett, 2000; Rust, Lemon, and Zeithaml 2004; Soberon-Ferrer and Dardis 1991). In the sections that follow, we provide brief reviews of the relevant literature for these direct effects, but we do not offer formal hypotheses for them. Instead, we focus on the moderating effects depicted by the solid lines in Figure 1. Specifically, we predict that customer, relational, and marketplace characteristics moderate the relationship between satisfaction and objective repurchase behavior after we explicitly control for their direct (i.e., main) effects. Moreover, we believe that these variables do not moderate the relationship between satisfaction and repurchase intentions after we control for direct effects.

For conceptual, methodological, and empirical reasons, we believe that customer, relational, and marketplace characteristics moderate the effect of satisfaction on objective repurchase behavior but not on repurchase intentions. First, consumer resource allocation theory suggests that repurchase behavior reflects intervening contingencies that measures of repurchase intentions do not. Consumers allocate a variety of resources to purchase decisions (Batshell 1980; Roberts and Dant 1991; Zeithaml 1988), including money (Marmorstein, Grewal, and Fishe 1992), time and effort (Becker 1965; Feldman and Hornik 1981; Jacoby, Szybillo, and Berning 1976), motivation, opportunity, and cognitive ability (e.g., MacInnis and Jaworski 1989; MacInnis, Moorman, and Jaworski 1991; Peracchio and Meyers-Levy 1997). One stream of research depicts consumers as cognitive misers (e.g., Shugan 1980) who lack the motivation and cognitive ability to incorporate intervening contingencies into their predicted repurchase probabilities. Because consumers are not motivated to consider simple intervening characteristics (e.g., how different levels of income might facilitate or constrain future repurchase activity) or capable of foreseeing complex intervening factors (e.g., competitive interactions among firms), they routinely provide inaccurate predictions of their future behavior (Kahneman and Snell 1992; Morwitz 1997; Morwitz, Steckel, and Gupta 1997). Thus, consumer resource allocation theory explains why people fail to consider intervening contingency effects in predicting their future behavior and predicts subsequent differences in their motivation and capability to engage in repurchase behavior.

Second, from a methodological perspective, we expect systematic differences in the measurement properties of repurchase intentions and behavior. Because intentions measures typically use five- or seven-point scales, information lost as a result of range restrictions and coarseness can attenuate researchers' ability to detect significant interaction effects that truly exist in the population (Russell and Bobko 1992). Range restriction occurs when information is lost because the highest or lowest point on the scale does not accurately capture extreme variations in the construct of interest. Similarly, coarseness refers to information that is lost when one-point scale variations do not accurately capture within-range variation in the construct of interest. Range-restricted and coarse scales may capture direct linear relationships with other constructs, especially if the two measures share common method variance and response bias (Bolton 1998; Morwitz and Schmittlein 1992). Measurement theory suggests that intentions measures do not capture the nuanced, complex variations that are provided by objective repurchase behavior measures, even if respondents could make accurate predictions.

Finally, prior empirical research demonstrates that the conversion of intent into repurchase is moderated by various factors, including the type of product (Jamieson and Bass 1989; Kalwani and Silk 1982; Young, DeSarbo, and Morwitz 1998), demographics (Morwitz and Schmittlein, 1992), experience (Bentler and Speckart 1979; Morwitz and Schmittlein 1992), and time lapse (Chandon, Morwitz, and Reinartz 2005; Mittal and Kamakura 2001; Young, DeSarbo, and Morwitz 1998). Studies that Chandon, Morwitz, and Reinartz (2005) conducted suggest that consumers provide relatively more accurate predictions of frequent, routine purchase decisions, such as those involving grocery items, than of infrequent, complex purchase decisions, such as those involving computers or automobiles. We attribute this

Table 1
Moderators of the Association Between Satisfaction and Repurchase

Study	Dependent Variable(s) Context and Design	Customer Characteristics	Relational Characteristics	Marketplace Characteristics
Bolton (1998)	Relationship Duration (OM) Telecommunications Longitudinal Contractual service		Length of experience (+)	
Bowman and Narayandas (2001)	Share of Category Requirements (SR) Consumer package goods Cross-sectional Noncontractual goods	Heavy user (+)	Loyalty (+)	
Bowman and Narayandas (2004)	Share of Customer Wallet (SR) Processed metal Longitudinal Noncontractual industrial goods	Size (–)	Account management tenure (+)	Satisfaction with competitor (+)
Burnham, Frels, and Mahajan (2003)	Intention to Stay with Provider (SR) Credit card and telephone service Cross-sectional Contractual service		Relational switching costs (n.s.)	Procedural switching costs (n.s.) Financial switching costs (n.s.)
Capraro, Broniarczyk, and Srivastava (2003)	Defection/Repurchase (SR) Health insurance Longitudinal Contractual service	Objective knowledge (n.s.) Subjective knowledge (n.s.)		
Garbarino and Johnson (1999)	Future Intentions (SR) Professional theater Cross-sectional Contractual and noncontractual service		Relational orientation (–)	
Homburg and Giering (2001)	a. Recommendation Intentions (SR) b. Brand Repurchase Intentions (SR) c. Dealer Repurchase Intentions (SR) Auto manufacturer/dealer Cross-sectional Contractual goods and services	Income SP (–: a, b, c) SSP (+: a, b) Involvement: SSP (–: b) Gender: SP (+m: c) SSP (+f: b) Age SP (+: a, b, c) SSP (–: b)	Variety seeking SP (–: a, b, c)	
Jones, Mothersbaugh, and Beatty (2000)	Repurchase Intentions (SR) Banking and hair salon Cross-sectional Contractual and noncontractual services		Interpersonal relationships (–)	Switching costs (–) Attractiveness of alternatives (+)

Table 1
Continued

Study	Dependent Variable(s) ContextandDesign	Customer Characteristics	Relational Characteristics	Marketplace Characteristics
Magi (2003)	a. Share of Purchase (SR) b. Share of Visits (SR) Grocery stores Longitudinal Noncontractual consumption goods	Economic orientation (–: a; n.s.: b) Personalizing orientation (–: a, b) Apathetic shopping orientation (n.s.: a, b) Age (n.s.: a, b) Purchase volume (+: a; n.s.: b)		
Mittal and Kamakura (2001)	Repurchase Behavior (OM) Automobile manufacturer Longitudinal Contractual durable goods	Sex (+) Education (+) Marital status (n.s.) Age (+) Children (+)		Urban versus suburban (n.s.)
Verhoef (2003)	a. Customer Retention (OM) b. Customer Share Development (OM) Insurance Longitudinal Contractual service		Relationship age (+: a; n.s.: b.)	
Verhoef, Franses, and Hoekstra (2002)	a. Customer Referrals (SR) b. Number of Services Purchased (OM) Insurance Cross-sectional and longitudinal Contractual service		Relationship age (n.s.: a; +: b)	
Current Study	Repurchase Intentions (SR), Repurchase Visits (OM), and Spending (OM) Apparel and home furnishings Cross-sectional and longitudinal Noncontractual fashion goods	Involvement Household income	Relationship age Relationship program participation	Competitive intensity Convenience of offering

Notes: +/– indicates that the effect of satisfaction on the dependent variable increases/decreases as the moderating variable increases/decreases; n.s. = not significant; SR = self-reported measure provided by respondent; OM = objective measure taken from secondary source; SP = satisfaction with the product; and SSP = satisfaction with the sales process.

lower accuracy in the prediction of infrequent, complex purchase decisions to unforeseen contingency effects that emerge between intentions measurement and subsequent repurchase (Kalwani and Silk 1982).

In the following section, we rely on this conceptual, methodological, and empirical evidence to develop specific hypotheses that build on prior research that has examined moderators of the satisfaction–repurchase relationship. In Table 1, we summarize the studies that support moderating effects of various customer, relational, and marketplace characteristics. We report the results only for moderating effects; that is, we do not include results for main effects. A review of Table 1 shows that our study makes unique contributions by testing formerly unexamined moderating variables; linking survey data to self-reported intentions and objective, longitudinal repurchase behavior; and investigating a previously understudied context marked by low exit barriers.

DEVELOPMENT OF HYPOTHESES

The conceptual framework we present in Figure 1 proposes three categories of moderators that operate at different levels. Customer characteristics explain variations in the satisfaction–repurchase relationship due to individual differences, relational characteristics capture customers' investments in building or formalizing relationships with a specific firm, and marketplace characteristics account for variations related to market-level competition. For each category of moderator, we propose and subsequently test two specific moderating variables. In each case, we predict an interaction effect after we control for main effects.

Customer Characteristics

Customer characteristics explain variations in peoples' purchase levels for an entire purchase category. We expect that customer-level variables have a direct influence on repurchase intentions and behavior and moderate the relationship between satisfaction and repurchase behavior. We examine involvement, a motivational resource, and household income, a monetary resource. Because both moderators are closely linked to key resources, they are likely to be among the most significant customer-level influences.

Involvement. Involvement is the importance of the purchase category to the consumer and is based on the consumer's inherent needs, values, and interests (Mittal 1995). From a resource perspective, highly involved customers allocate more time and effort to search (Beatty and Smith, 1987; Bloch, Sherrell, and Ridgway 1986; Maheswaran and Meyers-Levy 1990) and report higher levels of repatronage intentions (Wakefield and Baker 1998), which suggests a positive direct link between involvement and repurchase intentions and behavior. We acknowledge an alternative view that involvement could negatively affect repurchase intentions. More involved consumers may be more likely to search and potentially identify more preferred alternatives in the market, regardless of their level of satisfaction.

We also expect that involvement enhances the positive effect of satisfaction on actual repurchase behavior but not on repurchase intentions. Involved shoppers should allocate more time, effort, and money to retailers that provide exceptional satisfaction. They should also be more discriminating among offerings and more responsive and committed to superior offerings (Beatty, Kahle, and Homer 1988). This positive moderating effect would extend to repurchase intentions if involved customers accurately incorporated these complex effects into their predictions, but because we do not expect such incorporation to occur, we formally hypothesize the following:

H_1: Involvement (a) moderates (enhances) the positive relationship between customer satisfaction and objective repurchase behaviour but (b) does not moderate the positive relationship between customer satisfaction and repurchase intention.

Household income. Household income is positively related to consumers' routine expenditures for multiple types of services (Nichols and Fox 1983; Soberon-Ferrer and Dardis 1991), loyalty among online shoppers (Keaveney and Parthasarathy 2001), and profitable lifetime customer duration (Reinartz and Kumar 2000). On the basis of these findings, we expect that household income has a positive influence on repurchase intentions and behavior.

Household income should also intensify the relationship between satisfaction and repurchase behavior. The conversion of intent into purchase varies across groups that differ in their ability to fulfill that intent (Morwitz and Schmittlein 1992), and lower-income customers may be constrained in their purchases. Because higher-income customers place a higher value on time and are more discriminating in how they allocate their time (Marmorstein, Grewal, and Fishe 1992), they should visit and spend less at retailers that offer low satisfaction and more at retailers that offer high satisfaction. This positive moderating effect would extend to intentions only if higher- and lower-income customers accurately incorporated the enabling and constraining effect of income. Because we do not expect such incorporation to occur, we formally hypothesize the following:

H_2: Household income (a) moderates (enhances) the positive relationship between customer satisfaction and objective repurchase behavior but (b) does not moderate the positive relationship between customer satisfaction and repurchase intentions.

Relational Characteristics

Relational characteristics represent formal and informal bonds between the firm and its customers; relational bonds can create social and financial switching barriers that provide firms with an advantage insulated from competitor actions. Although relational moderators have been examined primarily in the context of contractual services, relational strategies designed to encourage discrete, ongoing repurchase are widespread. Proposed relational moderators include relationship age with the focal firm and participation in the firm's relationship program.

Relationship age. Prior experience influences intent, repurchase behavior (Anderson, Fornell, and Lehmann 1994; Morwitz and Schmittlein 1992), and loyalty (Ganesh, Arnold, and Reynolds 2000). Relationship age is positively related to customer profitability (Reinartz and Kumar 2000, 2003), retention (Bolton 1998), number of services purchased (Verhoef, Franses, and Hoekstra 2002), continued museum membership (Bhattacharya 1998; Bhattacharya, Rao, and Glynn 1995), and (we expect) repurchase intentions and behavior.

Empirical results indicate that length of prior experience enhances the positive association between satisfaction and subsequent relationship duration (Bolton, 1998) and that relationship age enhances the link between satisfaction and retention and the number of services purchased (Verhoef 2003; Verhoef, Franses, and Hoekstra 2002). This effect would extend to intentions only if relational customers accurately incorporated the moderating effect of prior relational investments, but because we do not expect such incorporation to occur, we hypothesize the following:

H_3: Relationship age (a) moderates (enhances) the positive relationship between customer satisfaction and objective repurchase behavior but (b) does not moderate the positive relationship between customer satisfaction and repurchase intentions.

Relationship program participation. Relationship programs represent company initiatives that target individual customers who agree to exchanges that may be complementary or ancillary to their purchase transactions. These pro- grams promote retention by enhancing customers' perceptions of the relationship investment and increasing their trust and commitment (De Wulf, Odekerken-Schroder, and Iacobucci 2001; Rust, Lemon, and Zeithaml 2004). Participants may receive personalized communications that keep them informed of new offerings or preferential treatment and rewards for past loyalty. Empirical findings indicate that relationship program participation has positive direct effects on intentions, usage levels, retention, and customer share development (Bolton, Kannan, and Bramlett 2000; Garbarino and Johnson 1999; Verhoef 2003).

We also expect that relationship program participation enhances the positive effect of satisfaction on repurchase behavior. Customers enter relationships in part to reduce the time and effort required for purchase decisions (Bhattacharya and Bolton 2000; Sheth and Parvatiyar 1995), which suggests that relationship program participants should be less inclined to shop around and more inclined to allocate purchases to relational providers that offer superior satisfaction. This positive moderating effect would extend to intentions only if customers accurately incorporated the moderating effect of relational program participation. Because we do not expect such incorporation to occur, we hypothesize the following:

H_4: Relationship program participation (a) moderates (enhances) the positive relationship between customer satisfaction and objective repurchase behavior but (b) does not moderate the positive relationship between customer satisfaction and repurchase intentions.

Marketplace Characteristics

Marketplace moderators feature interactions among customers, the focal firm, and competing firms. For example, intense competition that spurs price promotions may increase switching behavior and overall purchase volume, or new firms entering the marketplace may steal customers and market share from entrenched competitors. We examine the convenience of the focal firm's offering and its interaction with competitive intensity in the marketplace.

Convenience. Overall convenience is a second-order construct that consists of five types of time and effort costs involved in service experiences (Berry, Seiders, and Grewal 2002). Empirical findings indicate that convenience is significantly related to customer satisfaction and behavioral intentions (Andaleeb and Basu 1994), consumer switching behavior (Keaveney 1995), and customer perceptions and retention (Rust, Lemon, and Zeithaml 2004).

In addition to its direct effects, we propose that convenience enhances the positive effect of satisfaction on repurchase behavior but not on intentions. From a resource allocation perspective, a convenient offering conserves customers' time and effort and thereby facilitates a satisfied customer's ability to fulfill his or her intent. In this capacity, convenience functions less as an input to evaluation and more as an ongoing barrier that encourages or discourages repurchase behavior. This is likely to be particularly relevant for repatronage behavior, for which access to geo- graphically based retailers or other service firms is a major decision factor, and can produce both planned and unplanned trade-offs between degree of convenience and level of satisfaction. Thus:

H_5: Convenience (a) moderates (enhances) the positive relationship between customer satisfaction and objective repurchase behavior but (b) does not moderate the positive relationship between customer satisfaction and repurchase intentions.

Competitive intensity. We define competitive intensity as the level of direct competition that the focal firm faces within its immediate business domain. Competitive intensity can attenuate competitive advantage and influence repurchase behavior over time because competition erodes customers' perceptions of differential advantage along unsustainable dimensions. For example, convenience represents a characteristic that can be readily replicated in many marketplaces; thus, the relative advantage it offers when competition is low is eroded as competition intensifies.

We illustrate the expected interaction using an anecdote about gas station competition and repurchase. A consumer routinely travels three distinct routes along which he or she makes repurchase decisions. On the first route, there is only one gas station; the convenience of the offering may be paramount, so the traveler repurchases at this gas station, especially if he or she is satisfied with the service station but, when necessary, even if he or she is not. On the second route, there are two gas stations on opposite sides of the road, both of which are open with no waiting line; convenience may lead the traveler to repurchase at whichever station is on the side of the road in the direction he or she is traveling. Alternatively, one of the competitors may deliver higher satisfaction on another dimension, which would lead the traveler to cross the road if necessary to repurchase from the same gas station. On the third route, there are four gas stations located on the four corners of an intersection; each is open without a waiting line. Convenience may continue to play a key role (e.g., stop at the first one on the same side of the road that does not have a line), but an alternative decision rule could lead to convenience becoming irrelevant.

This anecdote suggests a three-way interaction among satisfaction, convenience, and competitive intensity. When competitive intensity is low, convenience prevents defection and facilitates repurchase behavior, thus exerting both a direct and a moderating influence on repurchase. However, as competitive intensity increases, convenience plays a less important role in the repurchase decision. It is not clear whether competitive intensity will have a significant direct effect, which would depend on whether customers perceive shopping synergies associated with a large number of competitors in a single destination, such as at a regional shopping mall. We do not expect that customers will incorporate these complex interactions into repurchase intentions, which suggests the following hypothesis:

H_6: Competitive intensity (a) moderates the relationships among customer satisfaction, convenience, and repurchase behavior such that convenience enhances the relationship between satisfaction and repurchase behavior when competitive intensity is low but not when competitive intensity is high but (b) does not moderate the relationship among customer satisfaction, convenience, and repurchase intentions.

RESEARCH DESIGN AND EMPIRICAL RESULTS

To examine our hypotheses, we worked with a national specialty retail chain that sells its own brand of upscale women's apparel and home furnishings in approximately 100 North American locations. The company provided contact information for 3117 customers and offered a $20 coupon to customers who responded to the four-page questionnaire. The customer list included randomly selected names of customers who had purchased merchandise from any store during the 12 weeks before the generation of the list. Thus, the sampling frame represents current customers.

Contact information included names and addresses for all 3117 customers and e-mail addresses for 1150 customers who had joined the relationship program, which featured frequent e-mails announcing newly arrived merchandise and promotions. We sent e-mail messages to all 1150 e-mail addresses, inviting potential respondents to click through to an online survey. Of these 1150 addresses, 264 e-mails were returned as undeliverable, leaving an effective sampling frame of 886. After two weeks, we sent an additional e-mail to nonrespondents, offering them another chance to participate. We ultimately received 285 surveys, for an effective response rate of 32%. We eliminated 12 respondents who provided incomplete information from subsequent analyses, leaving a total of 276 usable responses.

We sent postal mail to the other 1967 names on the customer list. Of these, 28 were returned as undeliverable, leaving an effective sampling frame of 1939. After four weeks, we sent a follow-up letter and survey to the non-respondents, offering them another chance to participate. A total of 721 people responded, for an effective response rate of 37%. Of these, 52 incomplete surveys were unusable, leaving a total of 669 usable responses. The 945 respondents to both surveys were primarily women (99%) between the ages of 35 and 54 years (66%) with at least some college education (96%) and an average household income exceeding $58,000.

Construct Measurement

We operationalized repurchase behavior using two measures from the company's records: the number of repurchase visits and the amount of repurchase spending during the 52 weeks after completion of the survey. The use of objective repurchase data for the year following the survey eliminates concerns of common method variance, simultaneity, or endogeneity. We log transformed the repurchase behavior measures to improve distribution normality.

Several independent measures were objective secondary data or single-item, self-reported measures. We measured household income as the median household income reported in the 2000 census for the respondent's zip code. Relationship age was a single-item measure (i.e., "How long have you been a … customer?"). Relationship program participation was a dichotomous variable indicating whether the customer had opted in to the company's e-mail program. To operationalize competitive intensity, we used

Census Bureau Zip Code Business Patterns data that report the number of establishments competing in each North American Industry Classification System (NAIC; http://censtats.census.gov/cbpnaic/cbpnaic.shtml); using the respondent's zip code, we included the total number of competitors in women's clothing (NAIC code 448120) and other home furnishings (NAIC code 442299).

We adapted multi-item scales to measure repurchase intentions (Parasuraman, Zeithaml, and Berry 1994), satisfaction (Voss, Parasuraman, and Grewal 1998), and involvement (Beatty and Talpade 1994). Because no comprehensive convenience scale existed, we followed standard procedures to develop scale items for each of the five convenience types (Berry, Seiders, and Grewal 2002). The multi-group confirmatory factor analysis that we report in the Appendix supports the reliability and consistency of the scales (Voss and Parasuraman 2003). We used mean scores for the latent constructs in subsequent regression analyses.

In Table 2, we present descriptive statistics and construct correlations for the variables of interest. Comparison of the means for the postal mail and e-mail samples indicates that relationship program participants are more involved, have lower relationship ages, and engage in more repurchase visits and spending. These mean differences raise questions as to whether there are differences in the structural relationships of interest across the two samples. We conducted an exploratory analysis to address this. Of the 15 possible structural differences across the three models (five for each model: repurchase visits, spending, and intentions), only one was significant at the $p < .05$ level; moreover, there was no increase in the adjusted R2 for any of the models. These results reinforce the generalizability of the findings across the two samples.

Hypothesis Testing

To test the hypotheses, we ran a series of regression analyses to estimate identical models for repurchase intentions, visits, and spending. Preliminary analyses indicated that the hypotheses were supported by 12 of the 18 tests and that the interaction effects of relationship age (H_3) and relationship program participation (H_4) were not significant in any model. For reasons of parsimony, we re-estimated the three models without these variables. We present the non-standardized coefficients and t-values for the reduced models in Table 3, in which we group the hypothesized interaction terms in the lower half to facilitate inferences about hypothesized effects. Each model is significant ($p < .01$), but the explanatory power of the model with repurchase intentions as the dependent variable is much higher than those with repurchase visits or spending as the dependent variable. This finding suggests that some of the explanatory power of the repurchase intentions model is due to shared method variance.

The relatively low explanatory power of the equations with objective dependent measures raises some concern about omitted variable bias. To address this concern, we reran the analyses and included lagged dependent measures (i.e., purchase visits and spending for the previous year), which capture unobserved, systematic variation across respondents. This lagged analysis produced no changes in the results for customer or market characteristics and a minor attenuation of the direct effects of relational characteristics, thus indicating that the lagged dependent variables partially mediate the effects of relationship age and relationship program participation. These results suggest that omitted variable bias is not a significant concern.

Repurchase behavior. In the repurchase visits model, three of the four hypothesized interactions (income × satisfaction, convenience × satisfaction, and convenience × competition × satisfaction) are significant and in the expected direction. These three results are replicated in the repurchase spending model, in which the fourth interaction term (involvement × satisfaction) is also significant and in the expected direction. Thus, H_{1a} receives partial support, and H_{2a}, H_{5a}, and H_{6a} are fully supported in both analyses. The graphs in Figure 2 facilitate interpretations of these results.

With regard to H_{1a}, involvement moderates the satisfaction–repurchase spending link ($t = 2.22$, $p < .05$, effect size [ES] = .07) but not the satisfaction–repurchase visits link (Cohen

Table 2

Descriptive Statistics and Correlation Matrix for the Constructs of Interest

	Overall Mean (Standard Deviation): N = 945	Postal Mail Mean (Standard Deviation): N = 669	E-Mail Mean (Standard Deviation): N = 276	1	2	3	4	5	6	7	8	9
1. Satisfaction	4.34 (.72)	4.36 (.71)	4.29 (.74)	1.0								
2. Involvement	4.03 (.73)	3.99* (.74)	4.14* (.70)	.27	1.0							
3. Household income	58,776 (20,254)	59,941* (20,500)	55,952* (19,394)	–.06	–.05	1.0						
4. Relationship age	3.13 (2.44)	3.39* (2.68)	2.50* (1.56)	.01	.10	.06	1.0					
5. Relationship program participation	.29 (.45)	0 (0)	1 (0)	–.04	.10	–.09	–.17	1.0				
6. Convenience	3.89 (.54)	3.88 (.53)	3.92 (.55)	.66	.28	.02	.09	.03	1.0			
7. Competitive intensity	7.45 (10.39)	7.59 (10.55)	7.12 (10.03)	–.01	–.03	.03	.01	–.02	.00	1.0		
8. Repurchase intentions	4.31 (.70)	4.29 (.71)	4.36 (.68)	.53	.48	–.06	.03	.04	.47	.00	1.0	
9. Repurchase visits	4.13 (9.62)	3.27* (9.03)	6.22* (10.65)	.07	.10	.01	.03	.14	.11	–.01	.11	1.0
10. Repurchase spending	326.68 (1083.00)	237.97* (644.33)	541.72* (1718.80)	.07	.11	.00	.00	.13	.10	–.03	.10	.74

*Means are significantly different across groups ($p < .01$); correlations ≥ |.07| are significant at $p < .05$ (two-tailed test).

1988). As we show in Figure 2, Panel A, the relationship between satisfaction and repurchase spending is positive only when involvement is high; it is flat when involvement is low. For H_{2a}, household income moderates the link between satisfaction and repurchase visits ($t = 3.12$, $p < .01$, ES = .10) and between satisfaction and repurchase spending ($t = 2.53$, $p < .01$, ES = .08). As we show in Figure 2, Panel B, the relationship between customer satisfaction and repurchase spending is not significant when household income is low, but it is significantly positive when household income is high. Consistent with resource allocation theory, this result shows that highly satisfied, lower-income customers are constrained in their repurchase spending.

Insert table here (Table 2, pg.33)

In support of H_{5a}, the convenience × satisfaction term is significantly positive in both the repurchase visits ($t = 1.85$, $p < .05$, ES = .06) and the repurchase spending ($t = 1.73$, $p < .05$, ES = .06) models. In support of H_{6a}, the three-way convenience × competition × satisfaction term is significantly negative in the two objective repurchase behavior analyses (repurchase visits: $t = –2.17$, $p < .05$, ES = .07; repurchase spending: $t = –2.44$, $p < .05$, ES = .08). To examine the nature of the interaction effect, we divided the overall sample into three (low, medium, and high) sub- groups based on competitive intensity and reran the analysis. The results indicate that the convenience × satisfaction term is significant only in the low-competition subgroup. As we show in Figure 2, Panel C, the relationship between customer satisfaction and repurchase spending is not significant when convenience is low, but it is significantly positive when convenience is high.

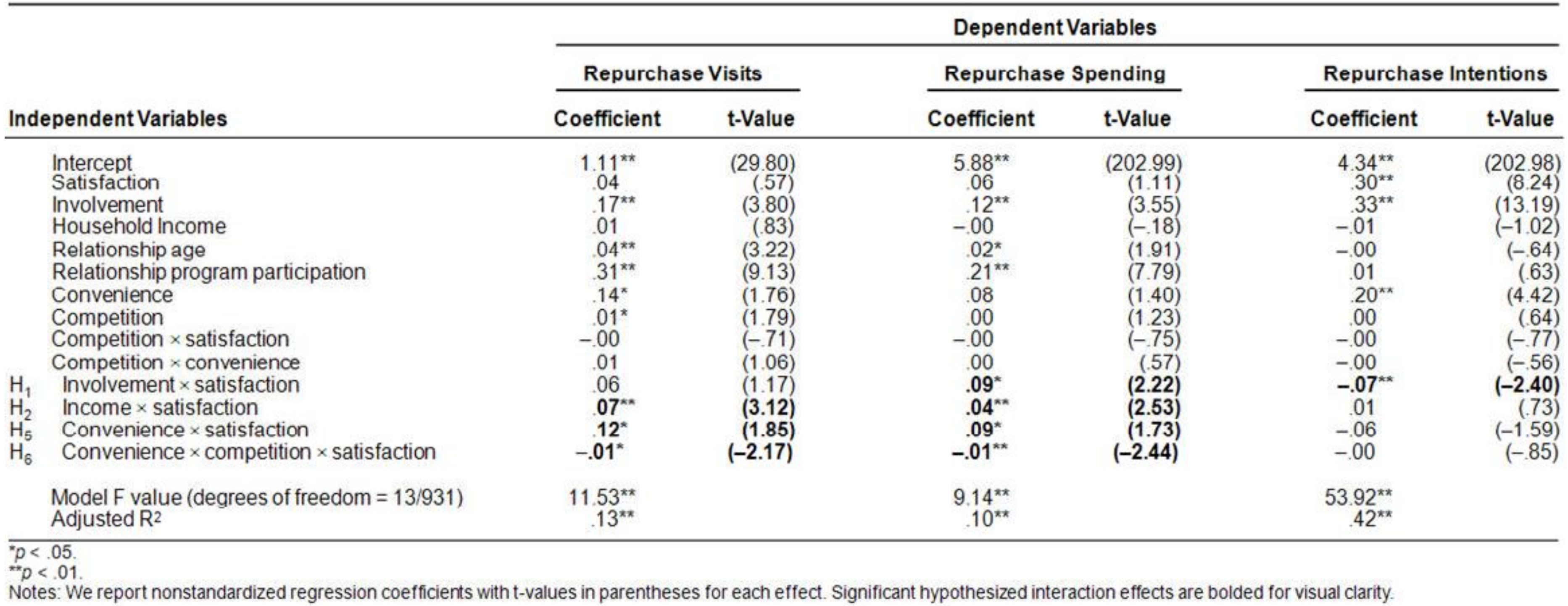
Repurchase intentions. The significant, negative coefficient for the involvement × satisfaction interaction term is the only unexpected result for the repurchase intentions model. As we show in Figure 2, Panel D, the relationship between satisfaction and repurchase intentions is more positive when involvement is low than when involvement is high, and repurchase intentions are nearly as strong for highly satisfied, low-involvement customers as for highly satisfied, high-involvement customers. Combining the results from Figure 2, Panels A and D, offers additional insight: Low-involvement customers overestimate the impact of increasing satisfaction on their subsequent repurchase behavior.

Examining the Baseline Direct Effect

Although we did not hypothesize the baseline direct effects captured by the dotted lines in Figure 1, the results offer some inferences worth noting. For the repurchase visits model, five of the six antecedents—involvement, relationship age, relationship program participation, convenience, and competition—have significant main effects. Although the main effects of satisfaction and income are not significant, significant higher-order terms indicate that the direct effects are contingent. The results for the repurchase spending model are largely similar to the repurchase visits model; although the main effects of convenience and competition are not significant, significant higher-order terms indicate that the direct effects are contingent. These results offer general support for the baseline model depicted in Figure 1, in that all antecedents have a significant effect on repurchase visits and spending. All main effect sizes are small (ES ≤ .11), with the exception of relationship program participation, which has the strongest effect size (ES = .29) with repurchase visits as the dependent variable.

Only three antecedents have significant effects on repurchase intentions. The main effect sizes are moderately large for involvement (ES = .40) and satisfaction (ES = .26) and are smaller for convenience (ES = .14). Household income, relationship age, relationship program participation, and competitive intensity have no significant effects. Common method variance offers a plausible explanation for this pat- tern of results; all the independent variables that are self- reported measures using Likert scales are positively related to repurchase intentions, but the other measures are not. In general, our findings, with some interesting exceptions, confirm the results of prior studies that report significant direct effects of the model’s antecedents on both repurchase intentions and behavior.

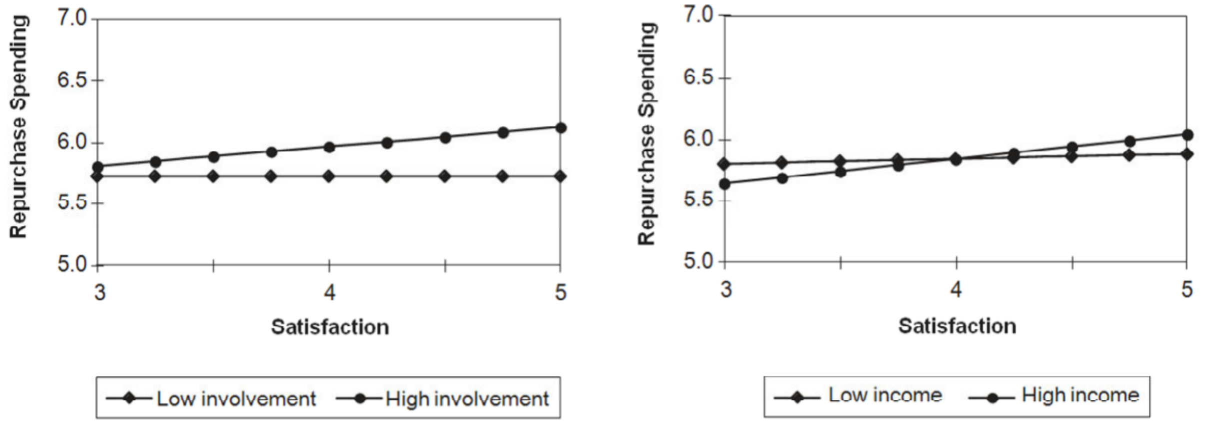
Table 3
Regression Analysis Results



		Dependent Variables					
		Repurchase Visits		Repurchase Spending		Repurchase Intentions	
	Independent Variables	Coefficient	t-Value	Coefficient	t-Value	Coefficient	t-Value
	Intercept	1.11**	(29.80)	5.88**	(202.99)	4.34**	(202.98)
	Satisfaction	.04	(.57)	.06	(1.11)	.30**	(8.24)
	Involvement	.17**	(3.80)	.12**	(3.55)	.33**	(13.19)
	Household Income	.01	(.83)	–.00	(–.18)	–.01	(–1.02)
	Relationship age	.04**	(3.22)	.02*	(1.91)	–.00	(–.64)
	Relationship program participation	.31**	(9.13)	.21**	(7.79)	.01	(.63)
	Convenience	.14*	(1.76)	.08	(1.40)	.20**	(4.42)
	Competition	.01*	(1.79)	.00	(1.23)	.00	(.64)
	Competition × satisfaction	–.00	(–.71)	–.00	(–.75)	–.00	(–.77)
	Competition × convenience	.01	(1.06)	.00	(.57)	–.00	(–.56)
H_1	Involvement × satisfaction	.06	(1.17)	**.09***	**(2.22)**	**–.07****	**(–2.40)**
H_2	Income × satisfaction	**.07****	**(3.12)**	**.04****	**(2.53)**	.01	(.73)
H_5	Convenience × satisfaction	**.12***	**(1.85)**	**.09***	**(1.73)**	–.06	(–1.59)
H_6	Convenience × competition × satisfaction	**–.01***	**(–2.17)**	**–.01****	**(–2.44)**	–.00	(–.85)
	Model F value (degrees of freedom = 13/931)	11.53**		9.14**		53.92**	
	Adjusted R^2	.13**		.10**		.42**	

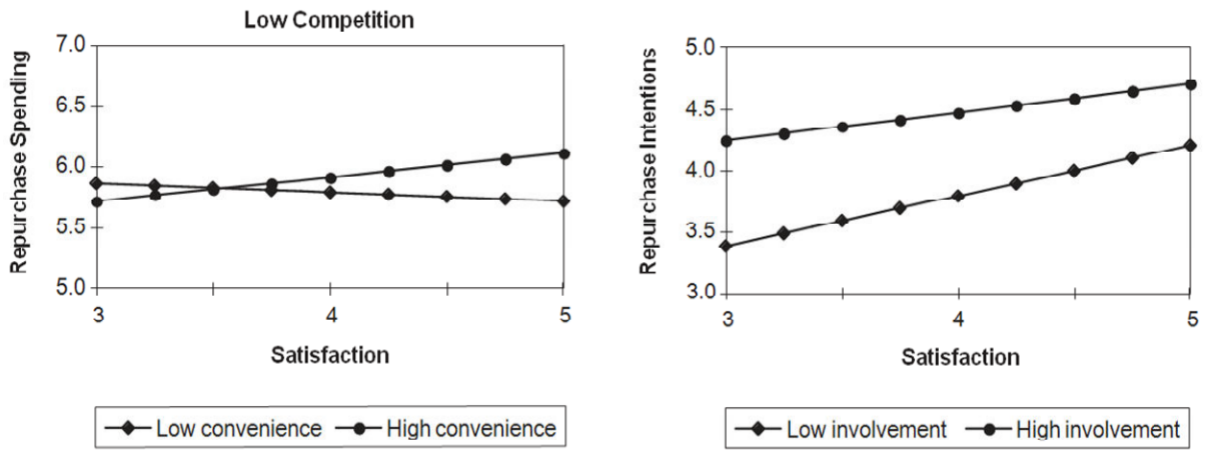
*$p < .05$.
**$p < .01$.
Notes: We report nonstandardized regression coefficients with t-values in parentheses for each effect. Significant hypothesized interaction effects are bolded for visual clarity.

Figure 2
Significant Interaction Plots



A: Plotting the Effect of Involvement and Satisfaction on Repurchase Spending[a]

B: Plotting the Effect of Income and Satisfaction on Repurchase Spending[a]



C: Plotting the Effect of Convenience and Satisfaction on Repurchase Spending when Competition Is Low[a]

D: Plotting the Effect of Involvement and Satisfaction on Repurchase Intentions

[a] The graphs understate the effect sizes in the repurchase spending panels because figures on the vertical axis are log natural transformations, so that 5 ≈ $148.41, 6 ≈ $403.43, and 7 ≈ $1,096.63.

DISCUSSION

The marketing concept, which proposes that customer satisfaction should be the focal point of business activities, is based on the explicit assumption that satisfied customers repurchase more and therefore are more profitable. In questioning this fundamental assumption, we predicted that customer, relational, and marketplace characteristics would moderate the relationship between satisfaction and repurchase behavior but not repurchase intentions. In a specialty retailing context, we find that satisfaction has a strong positive effect on repurchase intentions but no direct effect on repurchase behavior; customer and marketplace characteristics play significant moderating roles; and relational factors have a positive direct influence on repurchase behavior but not intentions.

Consistent with our prediction, we find that inferences related to moderating effects vary dramatically across self- reported repurchase intentions and objective measures of repurchase behavior. Our results show the absence of significant moderating effects on the satisfaction–repurchase intentions relationship for five of the six interactions, but they show the presence of significant moderating effects on the satisfaction–repurchase behavior (visits and spending) relationship for 7 of the 12 interactions. This pattern of results supports our argument—drawn from consumer resource allocation theory—that customers often fail to consider intervening contingency effects when they predict their own future behavior.

These divergent findings, consistent with the modest correlations between intentions and objective visits and spending (see Table 2), again raise questions about the reliability of customers' self-reported repurchase intentions for testing conceptual models of repurchase behavior, including those that examine the role of moderating variables. We summarize the hypotheses test results in Table 4.

Moderating Effects on Repurchase Behaviour and Intentions

Customer characteristics. Our results add to a growing body of research that offers strong support for the moderating role of customer characteristics on repurchase behavior across a variety of contexts (see Table 1). As we expected, involved customers shop and spend more than do less involved customers. The significant moderating effect on repurchase spending indicates that involved customers spend even more when their satisfaction is high (Figure 2, Panel A). The interaction effect is not significant for repurchase visits, which suggests that satisfaction has no linear effect on involved customers' repurchase frequency. These active shoppers likely patronize a variety of competing stores within their evoked set, and delivering satisfaction to this customer group simply establishes a presence in that set. Delivering superior satisfaction does not lead to increased repurchase frequency (i.e., customers continue to shop around), but it does lead to significantly higher spending. Unexpectedly, involvement has a negative moderating effect on repurchase intentions. Figure 2, Panel D, suggests that when low-involvement customers perceive superior satisfaction, they register significantly higher repurchase intentions; however, Panel A indicates that low-involvement customers fail to follow through on those intentions. Consistent with Becker's (1965) theory of time allocation, household income enhances the effect of satisfaction on repurchase visits and spending (Figure 2, Panel B). This result confirms the role of household income as a constraint that attenuates the influence of satisfaction on repurchase behavior for lower-income customers. As we expected, household income does not moderate the link between satisfaction and repurchase intentions. In contrast, household income has no significant direct effects, a finding we did not anticipate. This result may reflect the highly focused merchandising strategy and lifestyle orientation of the specialty retailer we studied.

Relational characteristics. Our results add to equivocal findings with respect to relational characteristics, which seem to play a moderating role in contractual or industrial purchase contexts or when specific types of repurchase behavior are examined (see Table 1). Relational variables may have weaker moderating effects in contexts marked by discrete purchase events and low exit barriers than in contractual relationships (e.g., Bolton 1998; Reinartz and Kumar 2000; Verhoef 2003). The predicted non-significant moderating effects of relationship age and relationship pro- gram participation on repurchase intentions and the positive direct effects on repurchase visits and spending but not on intentions are consistent with our belief that it is difficult for customers to incorporate background factors such as relationship age and program participation into future purchase predictions.

The results indicate that habit plays a major role in determining behavior in this context, and we speculate that relationship programs that feature direct communications may act as a personal shopper by providing updates on merchandise, sales, and promotions that simplify the shopping process. These programs conserve participants' resources and provide them with more frequent incentives to visit the retailer's stores. Participants may also perceive a greater relationship investment by the retailer and respond with higher behavioral commitment, even if their intentions are unaffected.

Marketplace characteristics. Our results add to the small number of studies that have demonstrated moderating effects of marketplace characteristics, and the results highlight the importance of considering firm × competitor interactions that distinguish retail competition across geographic marketplaces. The significant results for convenience as a positive moderator of satisfaction's effects on repurchase visits and spending highlight the importance of this relatively unexamined construct. Collectively, the findings suggest that convenience directly encourages repurchase visits but that repurchase spending occurs only if satisfaction also is high.

Convenience has been conceptualized as a multidimensional construct that has particular importance for retail patronage behavior (Seiders, Berry, and Gresham 2000). We contribute to the emerging literature in this area by developing and testing a scale that captures the multiple dimensions of shopping convenience. As a threshold variable, convenience assumes a different role from switching costs, which have been examined in other studies (e.g., Burnham, Frels, and Mahajan 2003; Jones, Mothersbaugh, and Beatty 2000). Whereas switching costs represent a one-time penalty for customers that is directly associated with moving from one firm to another, convenience is a strategically used marketing variable and a relatively stable attribute of the offering. The lack of convenience can be a motive to defect, whereas the presence of convenience can motivate trial or discourage defection.

Our study is one of the first to examine the moderating effect of competitive intensity on the satisfaction– repurchase relationship directly. The results support our expectation that increasing competition attenuates the positive effect of convenience, which is a relatively easy-to- copy source of advantage. It would also be instructive to explore the extent to which competitive intensity erodes other sources of competitive advantage. Furthermore, competition exerts a positive main effect on repurchase visits, which suggests that competitors in this category benefit from locating next to one another to create a shopping destination.

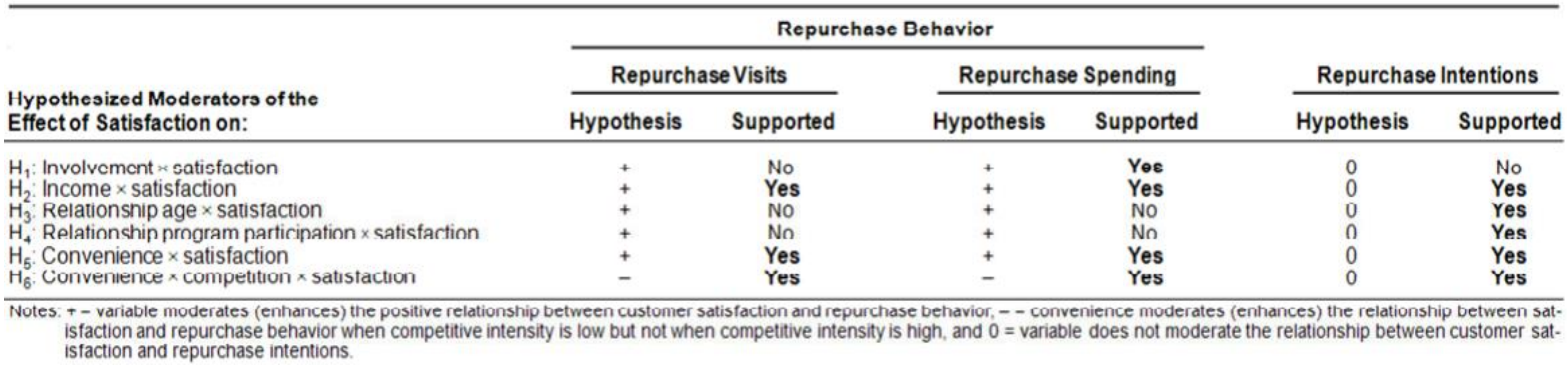
Implications for Managers

Satisfaction scores by themselves may not predict repurchase behavior accurately and may create false security if managers assume that higher satisfaction scores necessarily lead to stronger repurchase behavior. That someone is an ongoing customer suggests that he or she is at least somewhat or very satisfied (if not delighted). However, greater value may be gleaned by tracking defecting customers to determine the cause of their defection or by developing customer relationship management systems that track actual repurchase decisions. Such behavioral data are more accurate in evaluating the effectiveness of firms' marketing strategies and therefore represent an important complement to customer self-reported data.

Managers also would benefit from a better understanding of moderating variables, such as involvement and household income that can be used to segment customers into lower or higher repurchase groups. Firms can identify customers with higher levels of involvement and then attempt to foster long-term relationships with members of that group. Managers can invest resources in offering programs (e.g., by using initiatives such as in-store events, experiential classes, and charitable campaigns) to increase customer involvement. For example, Whole Foods Market regularly promotes a program in which it matches customers' contributions to featured national environmental organizations through the highly visible sale of coupons offered for purchase at the stores' checkout terminals. Our results support the assumption that these carefully focused initiatives can lead to more repurchase visits and spending by increasing involvement among customers.

Our results also suggest that managers should encourage repurchase behavior through deliberately multifaceted strategies that conserve customers' time and effort. For example, innovative and comprehensive approaches to site location analysis should be a priority for retailers. Retail firms can develop strategies that promote convenience and reduce uncertainty by communicating specific and detailed information about merchandise online and by focusing on coordination to ensure consistency across channels. Related to this is the importance of encouraging customers to opt in to permission-based communications and then delivering tangible value to those who

Figure 4
Summary of Hypothesized Results



Hypothesized Moderators of the Effect of Satisfaction on:	Repurchase Behavior: Repurchase Visits – Hypothesis	Repurchase Behavior: Repurchase Visits – Supported	Repurchase Behavior: Repurchase Spending – Hypothesis	Repurchase Behavior: Repurchase Spending – Supported	Repurchase Intentions – Hypothesis	Repurchase Intentions – Supported
H_1: Involvement × satisfaction	+	No	+	**Yes**	0	No
H_2: Income × satisfaction	+	**Yes**	+	**Yes**	0	**Yes**
H_3: Relationship age × satisfaction	+	No	+	No	0	**Yes**
H_4: Relationship program participation × satisfaction	+	No	+	No	0	**Yes**
H_5: Convenience × satisfaction	+	**Yes**	+	**Yes**	0	**Yes**
H_6: Convenience × competition × satisfaction	−	**Yes**	−	**Yes**	0	**Yes**

Notes: + = variable moderates (enhances) the positive relationship between customer satisfaction and repurchase behavior, − = convenience moderates (enhances) the relationship between satisfaction and repurchase behavior when competitive intensity is low but not when competitive intensity is high, and 0 = variable does not moderate the relationship between customer satisfaction and repurchase intentions.

participate in relationship pro- grams. In our study, respondents from the e-mail sample visited and spent approximately twice as much in the store as did the postal mail respondents (see Table 2). Managers should consider offering incentives to motivate customers to join these programs. Moreover, firms should not only allocate resources to attract and retain customers who elect to join permission-based communications programs but also use this channel as a means for creative differentiation. These types of initiatives construct effective exit barriers and contribute to competitive strength and viability.

Limitations and Further Research

As with all research, our study is constrained by limitations that suggest areas for further research. Although prior research suggests that satisfaction is a partial mediator of the effect of convenience on repurchase, we do not explicitly examine the direct effect of convenience on satisfaction. In terms of our sample, 99% was female; because prior research has demonstrated shopping differences between men and women, caution should be exercised when extending our findings to a general population. The sample also included only current customers; thus, our findings may not extend to noncustomers who have no experience with the firm or to customers who have defected. We encourage additional research that examines defection to illuminate the differences between customers who defect and those who do not.

We especially encourage additional studies that investigate direct and moderating effects of relational characteristics. We collected objective repurchase measures one year after we measured the relationship program participation, but endogeneity cannot be completely ruled out as an alter- native explanation for the robust direct effects, because customers who elect to participate in relationship programs may be particularly enthusiastic or loyal. If this is true, the causal ordering between relationship program participation and repurchase behavior is ambiguous. We believe that the involvement construct included as an independent measure effectively controls for purchase category enthusiasm, but we did not control for store loyalty. Further research could attempt to disentangle relationship program participation effects from the effects of other, related constructs.

The dynamism of fashion, which encourages variety- seeking shopping behavior, might explain the lack of significant moderating effects of relational characteristics in the current study. Significant moderating effects of relational characteristics might be found in discrete repurchase con- texts that are less dynamic and less hedonic. The type of relationship program that the retailer implements might also affect whether moderating effects manifest. For example, relationship programs that are multilevel (e.g., with different levels of benefits) rather than dichotomous (as was the case with the retailer in our study) might elicit significant moderating effects.

Our results indicate key moderating roles of customer characteristics, such as involvement and income, and marketplace characteristics, such as perceived convenience and competitive intensity. Further research could provide a deeper understanding of how these variables and relational characteristics influence repurchase behavior across a variety of conditions. We suspect that convenience is important in explaining behavior for discrete, recurring purchase decisions and likely becomes even more important as the frequency of repurchase increases (e.g., supermarket shopping). The multidimensional convenience scale that we present in the Appendix may be useful in exploring the role of convenience in other purchase contexts.

The study of additional customer and marketplace characteristics that may moderate the satisfaction–repurchase relationship is an important next step. Customer characteristics that warrant examination for moderating effects (see Table 1) include the propensity to engage in relationships and variety seeking. Additional marketplace characteristics, such as switching barriers and the attractiveness of alternatives for customers, should also be investigated further (Jones, Mothersbaugh, and Beatty 2000). For example, if attractive alternatives exist, less-satisfied customers would be more likely to register regret (in passing up the alternative); thus, they should be less likely to repurchase from the focal retailer (Inman, Dyer, and Jia

1997; Inman and Zeelenberg 2002; Lemon, White, and Winer 2002). This suggests that the link between satisfaction and repurchase would be more positive when attractive alternatives exist.

We examine the impact of customer, relational, and marketplace factors in a specialty retailing context in which repurchase behavior equals repatronage. We propose that these three categories of moderators likely generalize across repurchase situations; thus, the conceptual framework in Figure 1 can be applied, for example, to brand repurchase and to retail repatronage behavior. More specifically, we expect that the categories of moderators are generalizable and that the specific variables in each category that are salient may vary across purchase situations. Therefore, the conceptual framework should be tested in additional repurchase contexts to confirm that it can generalize across products and services.

Finally, to our knowledge, no research has examined the role of situational factors in moderating the satisfaction–repurchase association. Decisions influenced by transitory needs, such as those driven by emergency, point-of-purchase, or time pressure factors, often lead customers to engage in isolated unsought, impulse, or suboptimal purchase behavior. Such situational moderating influences warrant better understanding in terms of how they affect specific, stand-alone transactions and ongoing customer–firm relationships.

Despite these limitations and opportunities for additional research, the current study introduces new insights into the moderated relationship between satisfaction and repurchase behavior in a context marked by discrete, recurring purchases. The conceptual framework and empirical results improve the understanding of the complex and contingent relationship between customer satisfaction and repurchase behavior and suggest that habit, convenience, task simplification, and individual differences in involvement and household income play important roles. The findings also serve to identify new directions for further research that ultimately will enhance the understanding of what drives repurchase behavior.

Item Descriptions	Lambda	Construct Reliability	Average Variance Extracted
Decision Convenience		.75	.52
I can easily determine prior to shopping whether SR will offer what I	.82		
Deciding to shop at SR is quick and easy.	.50		
I can quickly find information before I shop to decide if SR has what	.79		
Access Convenience		.82	.54
I am able to get to SR quickly and easily.	.79		
SR offers convenient parking.	.59		
SR offers convenient locations.	.87		
SR offers convenient store hours.	.67		
Transaction Convenience		.89	.73
I am able to complete my purchase quickly at SR.	.84		
SR makes it easy for me to conclude my transaction.	.93		
It takes little time to pay for my purchase at SR.	.78		
Benefit Convenience		.84	.57
It is easy to find the products I am looking for at SR.	.80		
I can easily get product advice at SR.	.59		
The merchandise I want at SR can be located quickly.	.85		
It is easy to evaluate the merchandise at SR.	.75		
Postbenefit Convenience		.80	.61
SR takes care of product exchanges and returns promptly.	.74		
Any after-purchase problems I experience are quickly resolved at	.73		

It is easy to take care of returns and exchanges at SR.	.76		
Satisfaction		.90	.74
I am pleased with the overall service at SR.	.82		
Shopping at SR is a delightful experience.	.87		
I am completely satisfied with the SR shopping experience.	.88		
Involvement		.89	.73
I have a strong personal interest in stores like SR.	.81		
Stores like SR are very important to me.	.92		
The kinds of products SR sells are important to me.	.84		
Repurchase Intentions		.81	.68
How likely are you to shop more often at SR in the future?	.80		
How likely are you to continue shopping at SR?	.84		
Fit Statistics			
Chi-square (degrees of freedom = 1363)	2351.60		
Nonnormed fit index	.93		
Comparative fit index	.94		

Notes: SR = the specialty retailer brand name.

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Acknowledgement: Reprinted with permission from the Journal of Marketing, published by the American Marketing Association, 2005 69(4): 26 – 43.

Market segmentation of the consumer market in South Africa

J.H. Martins
Bureau of Market Reserach

ABSTRACT

The consumer market can be segmented in various ways. This article concentrates on the calculation of the size of the South African consumer market, segmented by geographical area and demographic characteristics of households. Geographical segmentation is shown by province while the size of the South African consumer market is shown by population group, income group, life stage and life plane. The determining factors in segmentation of households by life plane and life stage are the level of education and age of the head of the household. Six life planes and five life stages are distinguished. In the absence of national expenditure data by Living Standards Measure (LSM®)* group, segmentation by LSM group is explained by means of expenditure data of households in Gauteng. Ten different LSM groups can be distinguished, depending on the amenities owned by the household, services used by them and where they live. Segmentation by type of outlet where consumers spend their money is explained in the article according to two major types of outlets namely, formal and informal outlets, each further subdivided into four groups.

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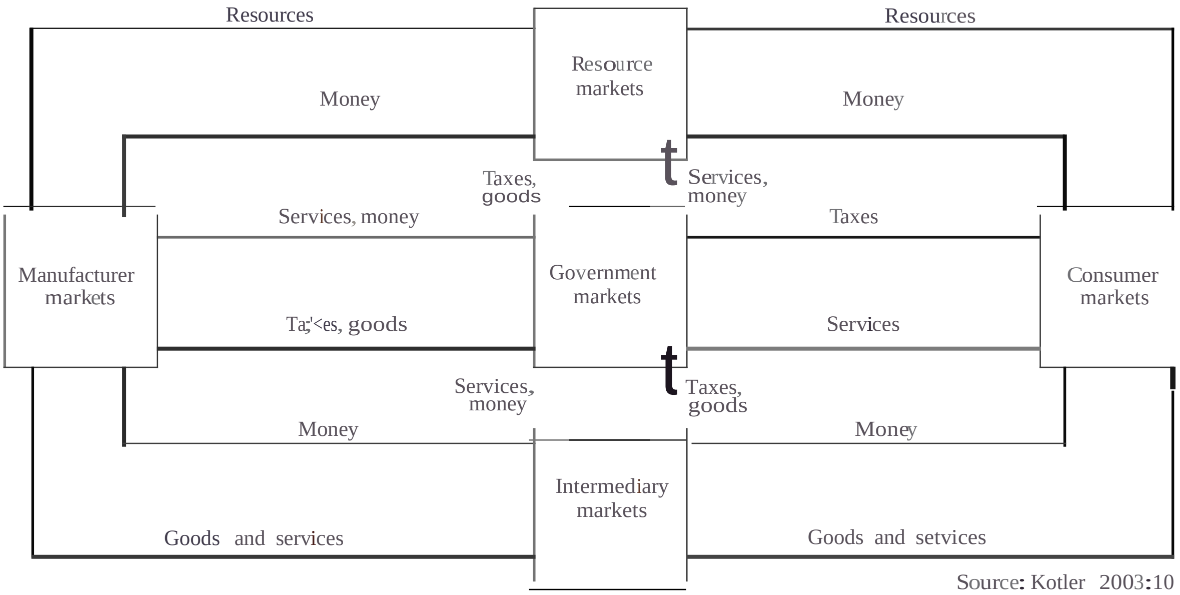
Business people often use the term market to cover vatious customer groupings. They talk about need markets (e.g. the diet-seeking market), product markets (e.g. the shoe market), demographic markets (e.g. the youth market) and geographic markets (e.g. the Botswana market); or they extend the concept to cover other markets, such as voter markets, labour markets and donor markets. Kotler (2003:10) distinguishes five basic markets as shown in Figure 1.

Figure 1
Structure of flows in a modern exchange economy



Source: Kotler 2003:10

Manufacturers go to resource markets (raw-material markets, labour markets, money markets), buy resources and turn them into goods and services, and then sell finished products to intermediaries, who sell them to consumers. Consumers sell their labour and receive money with which they pay for goods and services. The government collects tax revenues to buy goods from resource markets, manufacturer markets and intermediary markets, and uses these goods and services to provide public services. Each nation's economy and the global economy consist of complex interacting sets of markets linked through exchange processes. The structure of the South African consumer and business market is shown in Figure 2.

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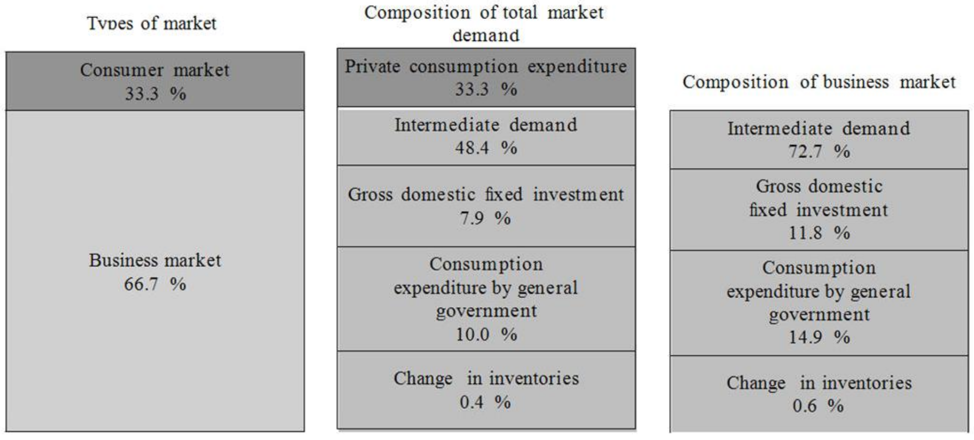
OBJECTIVES OF THE PAPER

The purpose of this paper is to look at the size and structure of and means of segmenting the South African consumer market. This kind of information is vital for, inter alia, retail companies to take decisions on the location of their outlets. The consumer market represents expenditure on products and services by private households and non-profit institutions. However, non-profit institutions will be excluded in the rest of the paper. Private households can be segmented according to a wide variety of characteristics, which will be discussed in the next section.

There are also various ways of segmenting the business market, the most common being segmentation according to the Standard Industrial Classification (SIC), segmentation according to geographical location and segmentation according to size group. The latter can be measured by employment, turnover and/or electricity consumption. However, segmentation of the business market falls outside the scope of this article.

Figure 2
Structure of the potential consumer and business market in South Africa


Types of market
Consumer market 33.3 %
Business market 66.7 %
Composition of total market demand
Private consumption expenditure 33.3 %
Intermediate demand 48.4 %
Gross domestic fixed investment 7.9 %
Consumption expenditure by general government 10.0 %
Change in inventories 0.4 %
Composition of business market
Intermediate demand 72.7 %
Gross domestic fixed investment 11.8 %
Consumption expenditure by general government 14.9 %
Change in inventories 0.6 %

Source: Calculated from Stats SA (2000).

SEGMENTATION OF THE CONSUMER MARKET

Churchill and Peter (1998:201) describe market segmentation as a process of dividing a market into groups of potential buyers who have similar needs and wants, value perceptions or purchasing behaviour. The particular market segment that a marketer selects to serve is called a target market.

Kotler (2000:263–71) distinguishes five types of consumer market segmentation, namely behavioural, demographic, geographic, multi-attribute and psychographic segmentation. Churchill and Peter (1998:205–17) distinguish the following types of segmentation: types of segmentation: demographic and psychographic segmentation, segmentation based on thoughts and feelings, segmentation based on purchase behaviour and multiple bases for segmentation (geodemography). Strydom, Cant and Jooste (2000:106–18) distinguish four types of segmentation, namely geographic, demographic, psycho- graphic and behavioural segmentation.

The most common means of segmenting consumer markets is to use demographic segmentation, which involves dividing the market on the basis of population characteristics. This may be because of the relative ease with which the approach can be applied. Information about variables such as gender, age, race or ethnicity, income level, occupation, education level, and household size and composition is readily available from population censuses and other official statistics.

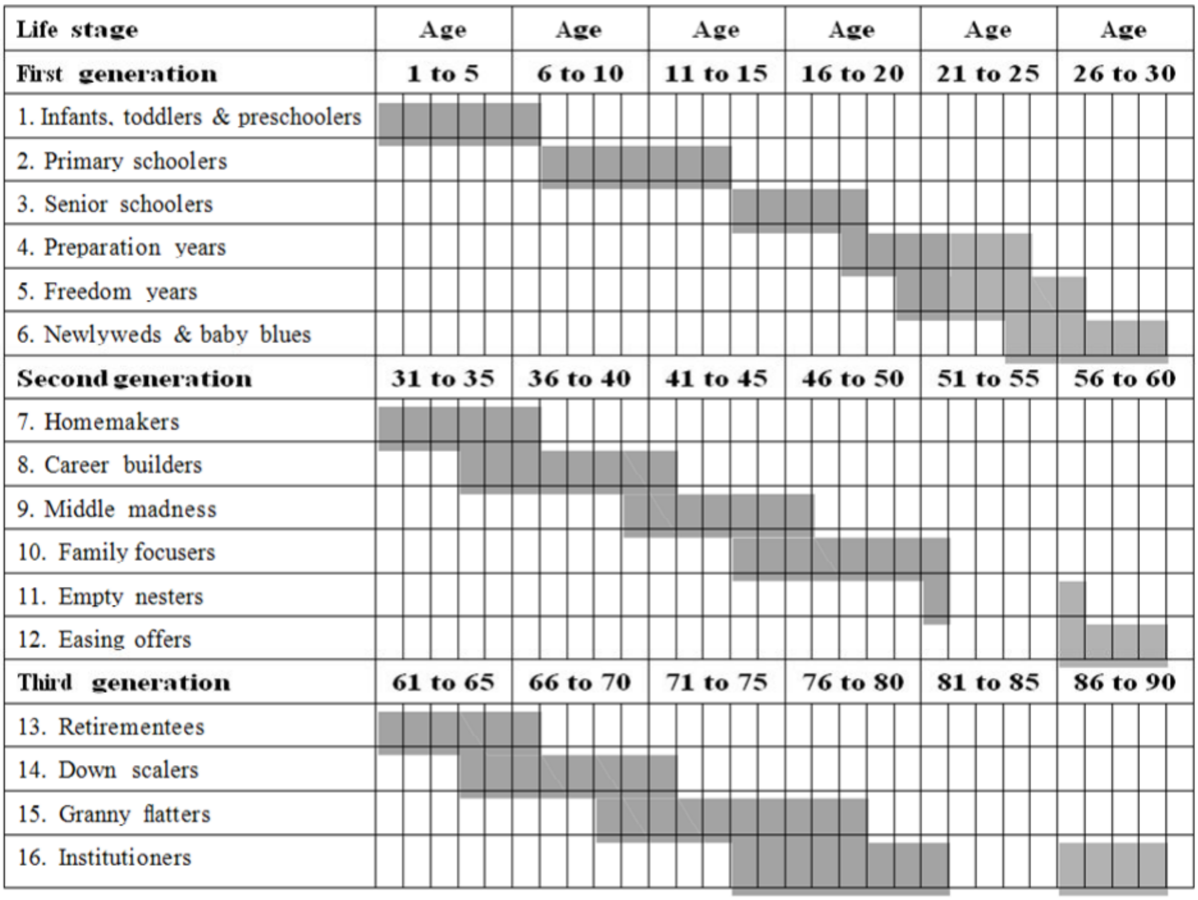
With geographic segmentation, the market is divided into different geographical units such as provinces, regions that may extend across provincial borders, countries or a group of countries such as the SADC countries, metropolitan areas, cities or neigbourhoods, suburbs or townships. Population density or type of township (formal vs informal) and climate may also be important in segmentation.

While demographic and geographic segmentation are relatively simple and straightforward, psychographic segmentation is not. People are divided into different groups on the basis of lifestyle, personality, social class and/or values. Kotler (2000:266–7) distinguishes six categories, namely strivers, devouts, altruists, intimates, fun seekers and creatives. Churchill and Peter (1998:211) refer to the following five psychographic categories as identified by Global Scan: strivers, achievers, pressured, adapters and traditional. Strydom et. al. (2000:114) refer to the following five value groups as identified by AC Nielsen MRA’s Sociomonitor Value Groups’ Survey: conformists, traditionals, progressives, nonconformists and todayers.

Parker (1998) suggests market segmentation by life stage and life plane, which can be seen as a combination of some elements of demographic and psychographic segmentation. A matrix approach may be used to combine both measures in order to develop a single easy-to-use tool that retains all the qualities of the measures individually, and adds a substantial depth of perspective.

Segmentation of markets by life stage or age group shows how a person’s lifespan can be divided into five-year periods as shown in Table 1.
In each of these periods, peoples’ circumstances, interests, activities, buying behaviour and levels of consumer expenditure change. Let us take one specific socioeconomic group and look more closely at peoples’ activities during three of these life stages. In life stage 6 (age group: 16 – 20) people are generally finishing high school or busy with tertiary education. A few work full time; many have part-time jobs. They mainly live with their parents. Their income consists mainly of allowances and they spend most of this on petrol and entertainment. Life stage 7 (age group: 21 – 25, the ‘freedom years’) encompasses wonderful years with newly qualified people just starting out in their careers. They live in flats or possibly communes. These are courting years, and fun and entertainment feature strongly. Expenditure is self-indulgent – they spend their money on fashionable clothing, steakhouse meals, travelling, audio and video equipment, and a second-hand car on instalment purchase. Sport and outdoor activities are a great attraction and a considerable quantity of beer is consumed. People in life stage 8 (age group: 26 – 30) are

Table 1
Life stage model



Life stage	Age	Age	Age	Age	Age	Age
First generation	**1 to 5**	**6 to 10**	**11 to 15**	**16 to 20**	**21 to 25**	**26 to 30**
1. Infants, toddlers & preschoolers	▨▨▨▨▨	▨☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐
2. Primary schoolers	☐☐☐☐☐	☐▨▨▨▨	▨▨▨☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐
3. Senior schoolers	☐☐☐☐☐	☐☐☐☐☐	☐☐☐▨▨	▨▨▨☐☐	☐☐☐☐☐	☐☐☐☐☐
4. Preparation years	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐▨▨▨	▨▨▨▨☐	☐☐☐☐☐
5. Freedom years	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐▨	▨▨▨▨▨	▨☐☐☐☐
6. Newlyweds & baby blues	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐▨▨	▨▨▨▨☐
Second generation	**31 to 35**	**36 to 40**	**41 to 45**	**46 to 50**	**51 to 55**	**56 to 60**
7. Homemakers	▨▨▨▨▨	▨☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐
8. Career builders	☐☐☐▨▨	▨▨▨▨▨	▨☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐
9. Middle madness	☐☐☐☐☐	☐☐☐☐▨	▨▨▨▨▨	▨☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐
10. Family focusers	☐☐☐☐☐	☐☐☐☐☐	☐☐☐▨▨	▨▨▨▨▨	▨☐☐☐☐	☐☐☐☐☐
11. Empty nesters	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	▨☐☐☐☐	▨☐☐☐☐
12. Easing offers	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	▨▨▨▨☐
Third generation	**61 to 65**	**66 to 70**	**71 to 75**	**76 to 80**	**81 to 85**	**86 to 90**
13. Retirementees	▨▨▨▨▨	▨☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐
14. Down scalers	☐☐☐▨▨	▨▨▨▨▨	▨☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐	☐☐☐☐☐
15. Granny flatters	☐☐☐☐☐	☐☐☐▨▨	▨▨▨▨▨	▨▨▨☐☐	☐☐☐☐☐	☐☐☐☐☐
16. Institutioners	☐☐☐☐☐	☐☐☐☐☐	☐☐☐▨▨	▨▨▨▨▨	▨☐☐☐☐	▨▨▨▨☐

Source: Parker (1998).

the 'newlyweds and baby blues'; they are people with new responsibilities. Many are newlywed, live in flats and both partners commute to work. The first baby arrives and these young parents need to change their lifestyles drastically as they learn to cope with nappies, disturbed sleep, doctors' bills, toys, baby-sitters and playgroups. They spend most of their income on meeting practical needs – they buy washing machines and nursery equipment, and entertainment is more than a little curtailed.

Educationis the key element of segmentation by life plan or sociopolitical group. Buying behaviour, store choice and consumer expenditure levels are a function of life plan. While education influences attitudes and perceptions and plays a major role in shaping expectations and aspirations, it is also the key to a person's choice of career, and there is little doubt that education influences performance.

To reflect the socioeconomic strata in the South African market adequately, Parker (1998) distinguishes between six life planes based on education levels. People at these different planes can be described as follows:

- Life plane A: People in the top life plane are doctors, lawyers, accountants, architects and engineers. They are usually graduate professionals.
- Life plane B: Plane B people are generally found in business. They do not have university degrees, but have studied beyond school and have been awarded a diploma. Many reach senior positions in business.
- Life plane C: Plane C people have completed their schooling, but have not studied further. They tend to be found in sales or clerical positions in business.
- Life plane D: Plane D people generally

have completed three or four years of senior school education and tend to follow technical careers. Many become artisans (plumbers, electricians, mechanics, etc.).

- Life plane E: Plane E people have completed only one or two years of senior school education, and many find jobs as factory workers and artisans' assistants.
- Life plane F: Plane F people have no secondary schooling and many are barely literate. Most people in this category find employment as domestic servants, gardeners and labourers.

The importance of education is reconfirmed when household income is analysed by social class across the life stages. The better educated a person is, the more he or she is likely to earn.

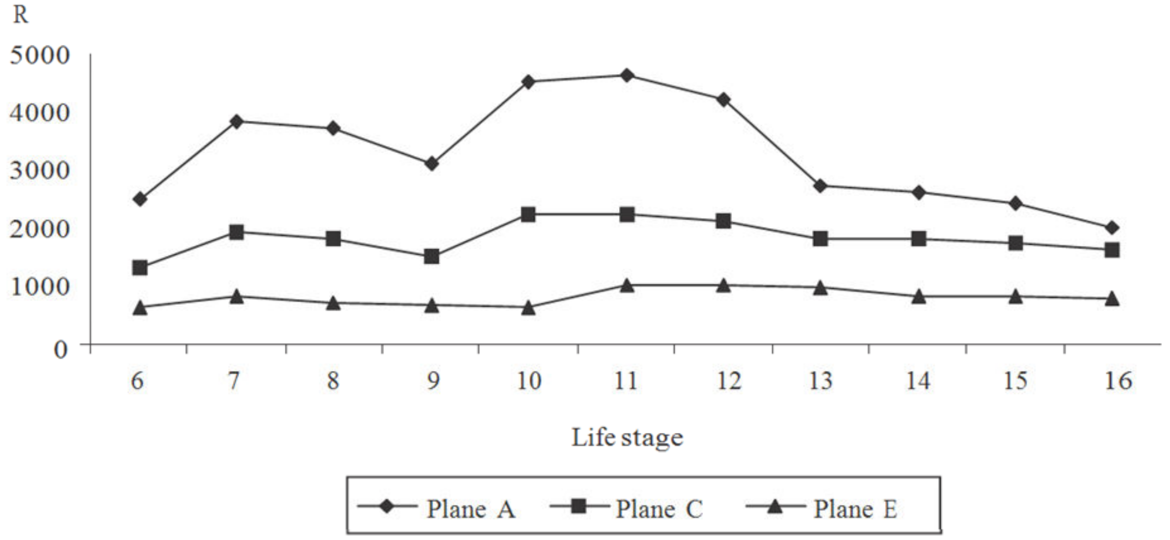
An analysis of expenditure by life plane shows that the magnitude of expenditure is not in line with income across the life stages, and the patterns shown between the planes are very similar, with peaks and valleys at the same points as shown in Figure 3.
This finding is extremely important. Simply because a household earns a certain income does not mean that they will spend that income in the same way and on the same things that other people with the same income would. Expenditure is very clearly a function both of life stage and life plane. Particulars of the head of the household (age and qualification) determine the cell into which a household falls.

As mentioned earlier, market segmentation denotes the division of a market into identifiable parts. The ESOMAR Social Grade (ESOMAR 1997) has attempted to lay down guidelines for such identifiable parts for households living in the European Union (EU). The development of the ESOMAR Social Grade is based on the philosophy of comparability of segments of people across nations in the EU. The ESOMAR Social Grade is a composite variable constructed from:

- the occupation of the main income earner in the household (the MIE)
- the terminal education age (TEA) of the MIE following a period of employment and,
- in the case of non-active MIEs, the economic status of the household, based on the household ownership level of ten selected consumer durables

During 1988/89the South African Advertising Research Foundation (SAARF®) developed a measure called the SAARF All Media and Products Survey (AMPS®) Living Standards

Figure 3
Household expenditure on clothing, footwear, accessories by life stage and life plane



Source: Parker (1998).

Measure (LSM®), which was better able to distinguish living standards than any single demographic variable (SAARF 2001). The LSM is a scale used for indicating the wealth status of a group. The eight levels initially distinguished were later extended to ten.

During 2001 SAARF decided to create an improved Living Standards Measure and launched a new SAARF Universal LSM structure (SAARF 2001). The new SAARF Universal LSM is based on universally applicable variables only. This means that all respondents can answer all the LSM questions, leading to a new universal index applicable to all adults of age 16+ years, without introducing a bias such as the one created by the "supermarket shopper" in the past, which sometimes led to a husband and wife not being in the same LSM category. The new SAARF Universal LSM is similar to the old version, but starts out with ten groups. What was previously referred to as LSM 7 low, 7 high, 8 low and 8 high are now known as groups 7, 8, 9 and 10 respectively. As South Africa's society develops, the SAARF Universal LSM has the ability to be extended beyond ten, and groups 11, 12 and so forth will be added as time goes by.

Of the original list of 20 variables used to determine a person's LSM category in the previous LSM system, 15 household variables have been carried through to the SAARF Universal LSM. In addition, the total number of variables has been extended to 29 to give finer definition to the scale.

The 29 variables are as follows: Hot running water, fridge/freezer, microwave oven, flush toilet in/outside house, no domestic in household, VCR, vacuum cleaner/floor polisher, no cellphone in household, traditional hut, washing machine, PC in home, electric stove, TV set, tumble-drier, home telephone, less than two radio sets in household, hi-fi/music centre, rural outside Gauteng/W Cape, built-in kitchen sink, home security service, deep freezer, water in home/on plot, M-Net/ DStv subscription, dishwasher, electricity, sewing machine, living in Gauteng, living in the Western Cape and motor vehicle in household. For more details the reader should refer to the AMPS technical report that is available from SAARF or on the Internet (SAARF 2001).

Market segmentation by type of outlet can also play an important role in distribution decisions by suppliers of goods and services. Lucas, Bush and Gresham (1994) state that increased competition, new technology, and changing demographics challenge retailers to develop new strategies for success. The effect of these forces is apparent in the changing structure of retailing. In the 1980s, as growing numbers of retailers vied for a share of the consumer's dollar, many firms were forced to merge or were bought out by stronger firms. New technology enabled retailers to devise new ways to meet customers' needs, which were also changing. In the 1990s, as retailers struggled to survive the turmoil of mergers, acquisitions, and liquidations, their future lay in their ability to meet customers' needs and desires creatively. As always, customers gravitate to those retailers with which they feel most comfortable. As customers' needs and wants change, retailers will have to change with them or cease to exist.

Whereas retailers in first world countries have to adapt to customers' sophisticated needs, traditional retailers and informal retailers in third world or developing countries are increasingly having to adapt to different needs. Informal retailers play an important role in South Africa. Ligthelm and Masuku (2003) state that 58.3% of total consumption expenditure (ie expenditure of households on goods and services) was spent on goods and 41.7% on services in 2002. Potential retail sales (ie expenditure on goods minus expenditure on personal transport equipment such as cars, tyres, petrol, paraffin and household fuel and power such as electricity) amounted to R316 581 million. Of this R206.7 billion or 65.3% was channelled through formal retail outlets such as Pick 'n Pay, Checkers, Spar and other retail outlets. Just more than a third (34.7% or R109.9 billion) was channelled through the following outlets:

- informal retail outlets such as spazas, hawkers and township general dealers

- non-store retailers such as mail order services and vending machines
- non-retail establishments such as wholesalers and agricultural and manufacturing outlets
- e-commerce/e-tailing services

It is estimated that approximately 10% of potential retail trade, amounting to approximately R32 billion, was channelled through informal outlets in 2002. A substantial portion of these sales can be attributed to spazas, hawkers and township general dealers.

TOTAL HOUSEHOLD EXPENDITURE

Total household expenditure or consumer market potentials can be calculated by using household expenditure data obtained through consumer surveys (direct method) and/or by using statistical series (indirect method) (Martins, Loubser & Van Wyk 1996:496–500).

- Consumer surveys

In consumer surveys the expenditure patterns of households are usually determined from a random sample of households, and then the total consumer market for a specific product in a particular region or regions is calculated by raising the sample results to the universe. Ordinary consumer surveys reveal the size of the current market for a particular product; future market potentials are determined over the short term by including questions about future buying intentions in the questionnaire. Unlike most of the other methods, consumer surveys reveal the demographic characteristics of consumers. Consumer surveys may be single-call surveys, consumer panels, or buying intention and purchasing probability surveys.

- The index method

The index method of calculating market potentials involves the application of statistical series that reflect the relative potential demand for a specific consumer product or service, or a group of products or services, or consumer products and services in general. The relative demand for a specific product in various geographical regions can be reflected by a single index, such as population, or by several series of data combined into a single statistical index. The series are usually expressed in percentages by area for the total market and therefore indicate the share of each geographical region in the potential consumption of a specific consumer product or service, or group of products or services, or products and services in general.

Total household expenditure in South Africa, calculated by household income and expenditure surveys, will be discussed according to geographical segmentation, population segmentation, income group, life stage and life plane, LSM group and type of outlet in the paper.

METHOD OF THE STUDY

The study provides a summary of research done by the author on income and expenditure of households and published in four research reports (Martins 2003; Martins 2004a; Martins 2004b; Martins 2004c). The major source for the calculations in the 2003 and 2004a reports was the Statistics South Africa (Stats SA) database of the household and income survey conducted in 2000 (Stats SA 2002), while the other two reports were based on information from the Bureau of Market Research (BMR) household income and expenditure surveys conducted in Gauteng in 2003. In the Stats SA and BMR surveys, face-to-face interviews were conducted with respondents representing randomly selected households. Pre-structured questionnaires, requesting information on approximately 50 income sources and 500 expenditure items and some demographic and housing information, were used for the interviewing. Questions relating to LSM segmentation and the type of outlet where purchases were made were not included in the Stats SA questionnaire. Consequently, information from the BMR survey in Gauteng was used to illustrate segmentation by LSM group and type of outlet.

Total household expenditure in the reports mentioned in this section was calculated by multiplying the average household expenditure on each expenditure item by the number of households. The population and number of households will be discussed in the next section.

POPULATION AND HOUSEHOLDS IN SOUTH AFRICA

Consumers can be viewed as individuals (members of the total population) or as households (one or more persons living together and whose food and other household expenses are usually managed as one unit). Table 2 shows the estimated population and households of South Africa for 2003 by province and population group. KwaZulu-Natal tops the list with a population of 9.7 million (20.9% of the total of 46.3 million). However, Gauteng has more households (2.6 million) than KwaZulu-Natal (2.7 million) because the average household size for Gauteng was 3.28 members as against the 4.27 members in KwaZulu-Natal.

HOUSEHOLD EXPENDITURE BY PROVINCE

Figure 4 depicts estimated total household expenditure in South Africa by province in 2003. Households living in Gauteng were responsible for an estimated 36.2% in Gauteng were responsible for an estimated 36.2% of the total expenditure of R681,1 billion, followed by KwaZulu-Natal (15.7%) and the Western Cape (15.5%). It is estimated that these three provinces, where 48.6% of the total population of South Africa resides, were responsible for 67.4% of the total household expenditure in South Africa in 2003. Figure 4 sets out the market shares of provinces in estimated household expenditure on food in South Africa for 2003.

A comparison of percentages reflected in Figures 4 and 5 shows that the market share of households in Gauteng in estimated household expenditure on food (33.7% – Figure 5) is smaller than their share in total estimated household expenditure (36.2% – Figure 4). The opposite is true for Limpopo Province, where the market share of households in household expenditure on food (7.2% – Figure 5) is far larger than their share in total household expenditure (4.9% – Figure 4).

Table 2
Population and households of South Africa, 2003

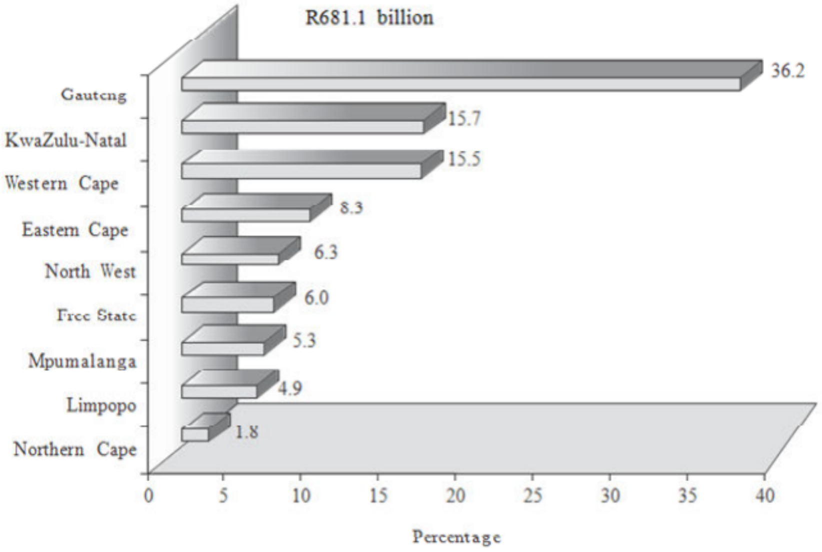
Province	Africans		Asians		Coloureds		Whites		Total	
	Population	Households	Population	Households	Population	Households	Population	Households	Population	Households
Eastern Cape	6 307 557	1 426 798	21 378	6 342	491 096	111 197	387 374	137 430	7 207 405	1 681 769
Free State	2 520 133	716 312	3 326	831	83 604	22 241	367 816	123 461	2 974 879	862 846
Gauteng	5 965 074	1 750 785	186 584	52 892	318 280	76 241	2 029 966	710 909	8 499 904	2 590 828
KwaZulu-Natal	8 045 878	1 763 573	838 605	207 644	128 040	39 802	651 588	253 624	9 664 111	2 264 645
Limpopo	5 539 624	1 226 599	6 534	1 536	8 784	1 665	141 807	44 478	5 696 749	1 274 279
Mpumalanga	2 896 321	707 448	15 073	3 615	23 305	7 137	300 822	82 896	3 235 521	801 098
Northern Cape	311 000	90 957	2 527	665	454 078	117 988	129 130	48 240	896 735	257 851
North West	3 477 408	934 178	11 029	4 375	50 444	12 222	262 707	86 891	3 801 588	1 037 668
Western Cape	972 108	266 930	48 573	15 381	2 345 219	552 800	370 800	4 344 899	4 344 899	1 205 912
Total RSA	36 035 103	8 883 583	1 133 629	293 286	3 902 850	941 296	5 250 209	1 858 733	46 321 791	11 976 900

Some fundamental differences prevail in the expenditure patterns of households across provinces with regard to the major expenditure groups. A large percentage of the average household's budget in cash and in kind accrues to food in provinces such as Limpopo and the Eastern Cape, where a relatively large percentage of households live in rural areas and where household income is relatively low. The large share spent on food can be attributed to the fact that food is a basic need and therefore money is first spent on food. What is left goes to other products and services. This is not necessarily applicable to all foodstuffs, since some can be considered luxury items.

HOUSEHOLD EXPENDITURE BY POPULATION GROUP

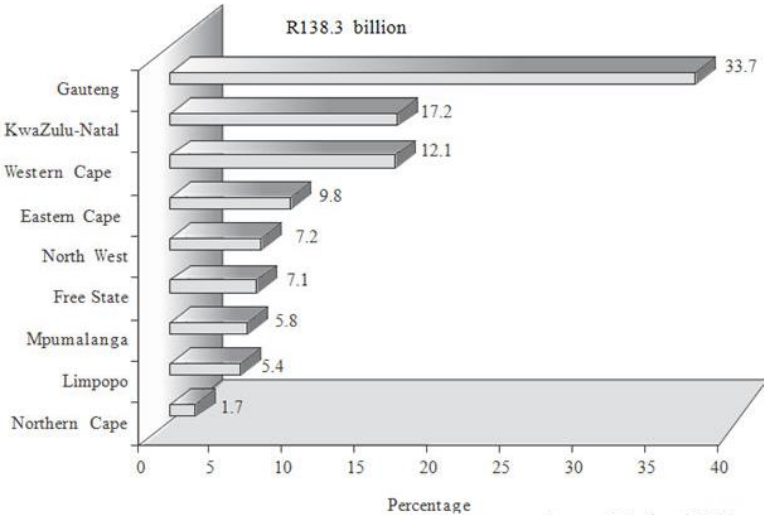
In 2003, African households had the largest share in total estimated household expenditure in cash and in kind of the four population groups. According to Figure 6, Africans were responsible for 46.2% and Whites for 41.8% of the estimated household expenditure of R681.1 billion in 2003. The share of Coloureds was 7.5% and that of Asians 4.5%.

Figure 4
Household expenditure in South Africa by province



Source: Martins (2003) (Adjusted figures).

Figure 5
Household expenditure on food in South Africa by province

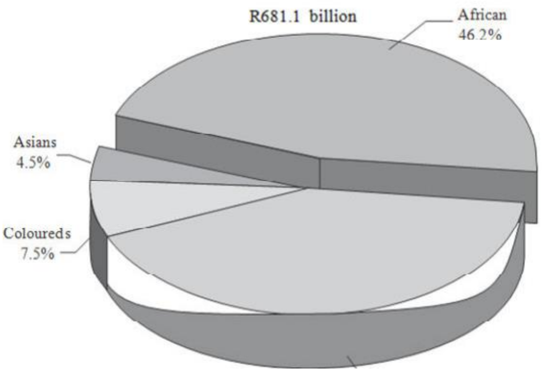


Source: Martins (2003).

HOUSEHOLD EXPENDITURE BY INCOME GROUP

Table 3 shows the monetary value of total household expenditure for five income groups on main expenditure groups in 2003. All households in South Africa were arranged according to income and divided by five – into quintiles. The total expenditure of the 20% poorest households in South Africa amounted to R16.0 billion as against the R443.5 billion for the 20% richest households. It can be calculated from table 3 that the share of the 20% poorest households was only 2.3% of total household expenditure, while the 20% richest households had a share of 65.1% in 2003. In addition, the share of the 20% poorest households was the highest for total household expenditure on fuel and light (14.5%), which includes paraffin, firewood and coal, and the lowest for holidays and weekend excursions (0.0%) and income tax (0.0%). The opposite is true for the 20% richest households, which were responsible for 92.4% of the R3.9 billion spent on holidays and weekend excursions and 89.7% of the R64.3 billion paid as income tax.

Figure 6
Household expenditure in cash and in kind in South Africa by population group



HOUSEHOLD EXPENDITURE BY LIFE STAGE AND LIFE PLANE

Table 4 shows total household expenditure in South Africa by life stage and life plane for 2003. Table 7 shows the shares of the different life stage and life plane groups in total expenditure. Total household expenditure for households falling into the 36 to 45-age group and in life plane A is calculated at R45.5 billion (Table 4), which represented 6.7% of the total household expenditure in South Africa in 2003 (Table 5). Table 4 shows that all households in life plane A were responsible for R145.7 billion household expenditure in 2003, which represented 21.4% (Table 5) of the total household expenditure of R681.1 billion in 2003.

Figure 7 compares the share in total household expenditure by life plane with the share in the number of households by life plane. Figure 7 shows that the household expenditure of all households falling into life plane A amounted to 21.4% of total household expenditure in South Africa in 2003, while the number of households falling into life plane A constituted only 5.7% of the households of South Africa. The figure clearly shows that expenditure as a percentage of total expenditure exceeded the number of households as a percentage of total households as one moves from plane A to plane D while the reverse is evident for life planes E and F. The 45.4% of households who fall into life plane F were responsible for only 9.4% of total household expenditure in 2003.

HOUSEHOLD EXPENDITURE BY LSM GROUP

This section provides information on total household expenditure by LSM group for Gauteng in the absence of national information (Martins 2004c). Due to the small number of people in Gauteng who fall into LSM group 1 (SAARF 2003) and the relatively small sample size, no information was collected for households falling into LSM group 1, while the information for LSM groups 2 and 3 is grouped together.

Figure 8 shows the shares of the different LSM groups in total household cash expenditure in Gauteng in 2003. A comparison of total household expenditure and the population shows the share of LSM group 10 in the total population to be 8.1%, while its share in total cash expenditure is estimated at 23.1%. The share in population of LSM group 9 is 16.6% as against a share of 28.1% in total cash expenditure.

Table 3
Total household expenditure in South Africa by income and main expenditure group

Main expenditure group	< R10 472	R10 473 – R19 275	R19 276 – R37 536	R37 537 - R82 569	R82 570 +	Total
	R'000	R'000	R'000	R'000	R'000	R'000
Total expenditure	15 996 410	33 387 326	61 490 000	126 657 962	443 537 016	681 068 714
Food	9 219 963	16 500 707	23 965 233	34 121 330	54 539 639	138 346 873
Clothing, footwear & accessories	886 110	2 179 928	3 956 285	6 890 252	11 893 356	25 805 932
Housing & electricity	1 046 708	3 138 478	7 563 092	19 700 941	80 970 545	112 419 764
Fuel & light	935 227	1 436 303	1 530 315	1 272 568	1 289 451	6 463 864
Transport	463 876	1 228 655	3 315 183	8 932 584	51 883 011	65 823 310
Medical & dental	147 050	323 288	842 921	3 335 320	19 634 713	24 283 292
Education	286 732	602 686	1 379 443	3 885 252	13 792 377	19 946 491
Insurance & funds	163 220	366 164	1 192 731	5 443 214	33 223 222	40 388 550
Recreation, entertainment & sport	24 473	94 333	274 236	706 032	5 242 931	6 342 005
Furniture & household equipment	176 851	657 752	1 701 897	3 890 961	13 536 230	19 963 690
Alcoholic beverages	200 937	782 599	2 110 958	4 985 345	11 184 098	19 263 936
Cigarettes & tobacco	276 803	649 079	1 379 737	2 845 911	4 660 228	9 811 757
Washing & cleaning materials, etc.	477 844	777 463	1 123 918	1 601 160	2 750 772	6 731 158
Personal care	925 748	1 875 930	3 146 005	5 207 587	10 143 969	21 299 240
Communication	108 586	425 424	1 073 954	2 930 118	10 591 624	15 129 705
Reading matter & stationery	20 836	81 223	303 865	958 229	3 223 514	4 587 667
Domestic workers	17 519	83 286	247 524	996 824	6 003 920	7 349 073
Support of relatives	192 138	631 139	1 812 933	4 084 741	5 039 662	11 760 612
Holidays/weekends (excl. transport)	888	4 000	40 224	248 300	3 557 705	3 851 117
Income tax	4 673	80 402	871 268	5 673 704	57 648 944	64 278 991
Miscellaneous	401 554	1 333 959	3 037 769	6 410 411	21 371 191	32 554 883
Savings	18 673	134 529	620 512	2 537 175	21 355 915	24 666 803

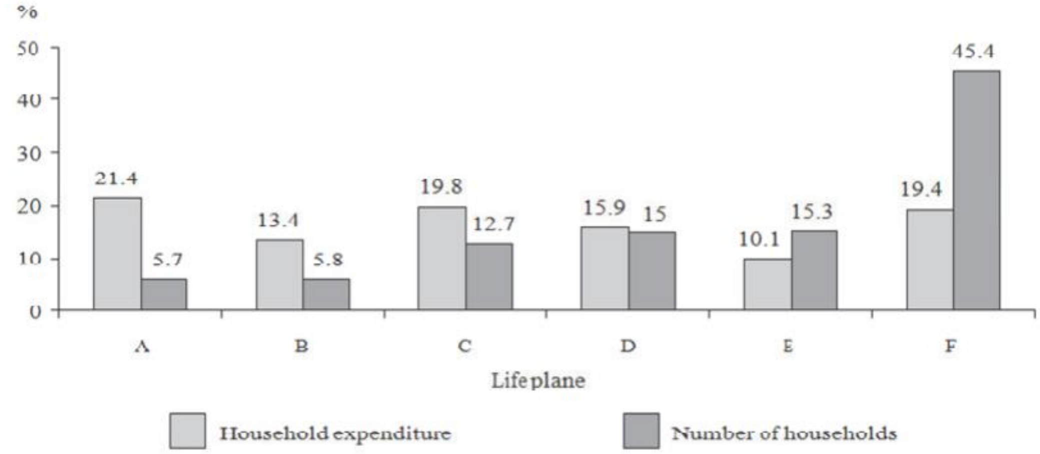
Table 4
Total household expenditure in South Africa by life stage and life plane

Life plan	<25	26-35	36-45	46-55	56+	Total
	R'000	R'000	R'000	R'000	R'000	R'000
A	3 593 591	36 145 349	45 545 824	24 577 637	24 577 637	145 704 953
	4 581 307	26 202 015	30 817 495	16 533 638	12 815 738	90 950 195
B	9 980 023	38 668 483	38 665 826	28 685 900	19 064 127	135 064 361
	4 447 946	25 515 710	35 830 004	23 641 681	19 132 420	108 567 764
C	2 744 064	10 775 114	19 017 187	17 792 327	18 131 256	68 459 950
	2 573 276	15 510 870	31 310 460	31 183 057	51 743 824	132 321 489
Total	27 920 210	152 817 543	201 186 799	153 679 155	145 465 004	681 068 713

Table 5
Share in total household expenditure in South Africa of life stage and life plane groups

Life plane	<25	26-35	36-45	46-55	56+	Total
	%	%	%	%	%	%
A	0.5	5.3	6.7	5.3	3.6	21.4
B	0.7	3.8	4.5	2.4	1.9	13.4
C	1.5	5.7	5.7	4.2	2.8	19.8
D	0.7	3.7	5.3	3.5	2.8	15.9
E	0.4	1.6	2.8	2.6	2.7	10.1
F	0.4	2.3	4.6	4.6	7.6	19.4
Total	4.1	22.4	29.5	22.6	21.4	100.0

Figure 7
Share in total household expenditure and total number of households in South Africa by life plane



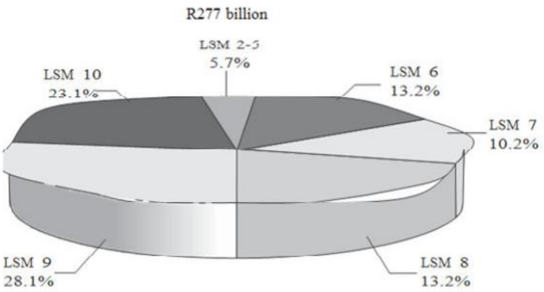
Source: Share in expenditure taken from Table 5 and share in number of households calculated from the database used for *Research Report* No. 322 (Martins 2003).

HOUSEHOLD EXPENDITURE BY TYPE OF OUTLET

The information in this section is for Gauteng in the absence of national information. Martins (2004b) estimated total cash expenditure of all households living in Gauteng at R277 billion in 2003. A subtotal of R94.9 billion is for goods sold mainly by retailers. A further R86.4 billion, is for goods generally not sold by retailers but where the type of outlet can play an important role while the third portion, with a subtotal of R95.7 billion is household expenditure where the type of outlet is not applicable.

Of the R94.9 billion expended on products usually sold by retailers, 90.6% accrued to the formal sector and 9.4% to the informal sector. Main expenditure items in this group that were generally channelled through the informal sector were alcoholic beverages (31.1%), reading matter and stationery (27.4%), cigarettes and tobacco (17.1%), fuel and light (16.7%), personal care (12.0%) and food (9.2 %). Households in Gauteng spent approximately R48.7 billion at super-or hypermarkets, R5.0 billion at wholesalers and factories, R3.1 billion with hawkers or at street markets, R2.4 billion at spazas, R1.6 billion at shebeens and R276.2 million on mail orders.

Figure 8
Share of LSM groups in total household cash expenditure (Gauteng)



Of the R44.2 billion spent on food, R40.1 billion or 90.8% was spent at formal and R4.1 billion or 9.2% at informal outlets. Of the R4.1 billion spent at informal outlets, approximately R1.8 billion was spent with hawkers or street markets, R1.6 billion at spazas and R707.4 million at other informal outlets. In the case of clothing and footwear, 4.4% or R495.3 million was spent at informal outlets, of which hawkers or street markets absorbed R258.9 million.

Considerable differences were observed between the buying behaviour of the different population groups with regard to the outlets used for their purchases. The following summarises these differences:

Items mostly sold by retailers	Formal outlets	Informal outlets
Africans	85.2%	14.8%
Asians	96.6%	3.4%
Coloureds	87.2%	12.8%
Whites	98.0%	2.0%
All households	90.6%	9.4%

Items mostly not sold by retailers	Formal outlets	Informal outlets
Africans	86.2%	13.8%
Asians	97.4%	2.6%
Coloureds	87.9%	12.1%
Whites	99.0%	1.0%
All households	93.4%	6.6%

SUMMARY

The main findings of the paper can be summarised as follows:

- More than one third (36.2%) of total household expenditure is spent by people who reside in Gauteng, one of the nine provinces in South Africa.
- Africans are responsible for 46.2% of total household expenditure in South Africa.
- The market share of the better-educated households (life planes A to C) clearly shows the material value of education.
- Households falling into LSM groups 9 and 10 were responsible for more than half (51%) of the total household expenditure in Gauteng in 2003.
- Just more than nine percent of products usually sold by retailers (9.2%) were bought at informal outlets.

APPLICATION OF THE INFORMATION BY RETAILERS

Companies are successful to the extent that they enter attractive markets and possess the required business skills to succeed in those markets. If one of these factors is missing, the business will not produce outstanding results. The purpose of this paper was to illustrate how the South African consumer market can be segmented. The information in the paper provides only aggregated totals. However, it is possible to use the information in the research reports mentioned to estimate the market potentials of smaller areas for individual products. This information can be used as a broad guideline by retailers to direct policy decisions on location, promotion and distribution. However, with an indication of the possible market size in an area, further research regarding the competition from other retailers is necessary before a decision to locate in the area can be taken.

Detailed information in the report estimating household expenditure by life plane and life stage (Martins 2004a), as summarised in this paper, can be used by retailers to construct a profile of potential and existing clients, if not already available. By studying the profile of the inhabitants of a residential area and/or the patrons of a shopping centre/mall and possible competition, an informed decision can be made on location.

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The relationship between consumer knowledge and gender in selecting grocery items

Dr Louise van Scheers
Department of Marketing and Retail Management
University of South Africa
vscheml@unisa.ac.za

ABSTRACT

Consumer knowledge and expertise of an industries prices, products and store location add to the ease at which consumers are able to cherry pick, they are informed of discounted prices on products as well as the product assortment of a particular store, through marketing and promotions. Many define cherry picking as taking the best and leaving the rest. Cherry picking is used to portray both buyer and seller. Various sellers can be viewed as those who are selective about which consumer profile they choose to target, whereas consumers are selective about which products or services they purchase. This article will focus on the consumers and their motive for cherry picking. Consumers who are branded as cherry pickers are price sensitive shoppers with no brand loyalty but this market segment has been found to be sizable, heterogeneous, and potentially attractive for retailers, contrary to the myth that they are a retailers' nemesis. Price knowledge means the ability of buyers to keep prices in mind; it influences what, when, where and how much they buy. Cherry pickers build price competitions between retailers'; therefore they should strive to have the most attractive offers and weekly advertisements, in order to draw the cherry pickers in and obtaining a greater turnover.

Consumer lmowledge and expeltise of an industries prices, products and store location add to the ease at which consumers are able to cheny pick, they are infonned of discounted prices on products as well as the product ass01tment of a pruticular store, through marketing and promotions. Price lmowledge means the ability of buyers to keep plices in mind. Commodity prices in the market play a relevant role in consumer decision-making; they influence what, when, where ru1d how much consumers buy (Alba *et al.*, 1999). It is of utmost imp01tance that retailers begin to incorporate strategies that target ru1d meet the needs of this type of consumer, as it will ensure a larger market share and in turn a greater turnover.

In this study we aim to explain the effect of a consumers' knowledge, with specific reference to product price knowledge, has on a consumers' propensity to cheny pick. We also aim to establish whether there is a relationship between price knowledge, consumer lmowledge and gender.

Cheny picking can be described as taking the best and leaving the rest according to Fox and Hoch (2003:1). Cheny picking is used to portray both buyer and seller. Various sellers can be viewed as those who are selective about which consumer profile they choose to target, whereas consumers are selective about which products or se1vices they purchase. This a1ticle will focus on the consumers ru1d their motive for cheny picking. Consumers who are branded as cheny pickers are price sensitive shoppers who tend to delay purchases or move from one shop to another looking for a better deal with regru·ds to plice, product variety and ass01tment. Levy and Weitz (2004) define cheny picking as consumers who visit a store and only buy merchru1dise sold at big discounts. Other factors that influence a consumer to cheny pick are store location, and store preference and consumer expertise/ knowledge. Piice lmowledge will be investigated as the main constmct in this study.

REASON FOR THE STUDY

There has been numerous studies conducted on cheny picking and price lmowledge in the USA and Europe but ve1y limited research has been conducted on these two constmcts in a

South African context. This study therefore attempts to investigate if the studies conducted on cherry picking and price knowledge hold true for consumers in South Africa.

OBJECTIVES OF THE STUDY

The main objective of this study was to investigate the effect price knowledge and gender has on a consumers' propensity to cherry pick. To achieve these objectives of the study the following hypotheses were set:

H_1: There is a correlation between price knowledge and gender

H_2: There is a significant relationship between cherry picking across time and price knowledge

H_3: There is a significant relationship between consumer knowledge and gender

LIMITATIONS OF THE STUDY

Research was only conducted in shopping malls within the Pretoria (Tshwane) area, therefore this study is not truly representative of the South African population. No research was conducted over weekends and in the early evening; this could therefore have a big impact on the final results of this study as most people conduct their shopping trips during this time thus obtaining a more representative sample of Pretoria. A larger percentage of females than males completed the questionnaire, and therefore this may have a bearing on the stronger results shown on the females to that of the males.

LITERATURE REVIEW

The literature that will be explored in this section will focus on price knowledge, cherry picking and consumer knowledge. In order to better understand cherry picking from a price point of view, price knowledge of consumer decision-making will be discussed in the next section as the main construct under investigation in this study.

The price knowledge and gender relationship

Commodity prices in the market play a relevant role in consumer decision-making, as they influence what, when, where and how much consumers' buy (Alba et al. 1999:100) and therefore studying consumers' price awareness is highly relevant. Price awareness or price knowledge means the ability of buyers to keep prices in mind (Aalto-Setala & Raijas. 2003:181). Majority of past studies on pricing have pointed out that consumers have very limited knowledge of prices. Price knowledge has therefore become the subject of increasing research interest. The consumers' price knowledge effect on consumers' selection of grocery items can be influenced by numerous factors, which may be related to the characteristic of the consumer or the product category (Estelami. 1998:254-256). The demographic background (for example; age, gender and income) of a consumer may affect their interest in products as well as their expertise as to their prices. It has been researched that females, who account for the larger percentage of purchases of jewellery products, would be more knowledgeable about prices in this category than males (Simmons market Research Bureau. 1994). This study will investigate if this statement holds true for grocery items purchased. Estelami (1998:256) researched the influence of demographics on price knowledge in a grocery shopping industry, this study will route from this research but will aim, once again, to do so in a South African context, therefore the following hypothesis was set:

H_1: There is a correlation between price knowledge and gender

Venhuele and Dreze (2002:78) found that there are different levels of price knowledge that a consumer can be found in. In the first level, there is no price knowledge, the second level reflects recognition of large price differences but this is still not perfect. The third level represents a consumers' ability to recall a price within a 5% difference from the actual price set. The last level represents a consumer ability to accurately recognise the actual price of a product; this level is representative of the highest and rarest form of price recall. Venhuele and Dreze (2002:80) also deduced that cherry picking has no impact on price knowledge, due to their increased task complexity from the average shopper.

Cherry picking across time and price knowledge

There are many definitions and descriptions of cherry pickers that have been compiled by various researchers (Fox & Hoch, 2003, Gauri, Sudhira & Talukdar, 2005, Levy & Weitz, 2004), but to give a summary of these descriptions, cherry pickers are purchasers who examine the different proposals of several retailers and pick out the best over one or more days. They are characterised as price sensitive and well informed customers, as they construct pre-determined shopping trips from promotions and sales advertisements previously viewed so that the best deals are utilised.

The American Marketing Association (2004) defines cherry picking as a buyer selection of only a few items from one's line and others from another line, failing to purchase a complete line or classification of merchandise from one source. Due to the shopping style of these customers, many affected retailers question their brand and store loyalty. Gauri, Sudhir & Talukbar (2005:1), argue against this the loyalty aspect of this definition as they found that cherry pickers can indeed be store loyal as they delay their shopping trip over time and in order to get a better price deal at the same store.

Secondary research done by the American Marketing Association (2004) shows that cherry pickers either keep a different reference price for each store they pick from or create an average reference price from several different sources. This may also leads to the lack of price knowledge. We will investigate if this statement holds true for the South African industry, therefore the following hypothesis was set:

H_2: There is a significant relationship between cherry picking across time and price knowledge

Although it is important that consumers are informed of the different prices offered at various places, it will benefit them even more if they have a general understanding of the retail industry as a whole. Finding from the research conducted by Fox and Hoch (2003) indicate this market segment is sizable, heterogeneous, and potentially attractive for retailers, contrary to the myth that they are a retailers' nemesis. The composition of the main decision-makers in a household their different characteristics could determine cherry picking to a greater or lesser extent (Fox and Hoch. 2003:12). See table 1 below for a better description.

Table 1:
Description of typical cherry pickers

Household type	Probability for cherry picking to occur
Larger households	More likely
Household with senior citizens	More likely
Household with homeownership	More likely
Wealthy household	Less likely
Household with working adult female	Less likely

From the deductions made above in table 1, one can conclude that cherry picking has a great influence on the retail industry from an economic point of view, and therefore is a cause of concern for the affected retailers of today. A consumers understanding and intellect of the retail industry has a big influence on their propensity to cherry pick. Consumer knowledge will therefore be discussed as the next important construct put under investigation this study.

Consumer knowledge and gender

Consumer knowledge or expertise is generally defined as a consumers' confidence or experience in shopping. Knowledgeable consumers are those who are well informed or "clued up" on the prices of products, the types of stores as well as product assortment. These consumers generally feel comfortable in sharing this knowledge with others as they see themselves as a good source of reference. Consumers inform themselves by searching for information on promotional material and constantly updating themselves on the latest product on the market or price specials at certain stores. If a consumer is enlightened through various media channels and word of mouth, they begin to store this information in their memory and begin to feel confident in their knowledge and therefore if information is asked of them, they share it with the thought of being a good source of information.

H_3: There is a significant relationship between consumer knowledge and gender

The method of analysis chosen and the results thereof will be follow next.

METHODOLOGY

The sampling, data collections and measures of the research will analysed in this section.

Sampling

Grocery shoppers were the targeted population of this study. We targeted our sample through the use of mall intercept and interviewer-administrated personal interviews at a variety of shopping malls.

The sampling frame was obtained from different shopping malls found in Pretoria (Tshwane), South Africa, based on convenience. Shopping malls found in areas representing the different LSM groups were targeted, thus affording us a closely representative sample of the population of Pretoria (Tshwane).

A realised sample size of 176 was obtained from a target sample size of 250 with 100% of the questionnaires being usable. This could be attributed to the use of personal interviews as a data collection method. The data collection method will now be discussed in more detail.

Data collection

A pilot study was conducted to on the questionnaire through 10 quasi interviews. Respondents were selected based on convenience and only "main family grocery shopper" was allowed to participate.

Data collection took place over a span of three days through the use of personal interviews at ten different shopping malls within the Pretoria (Tshwane) region. Well trained interviewees were used to conduct the research, thus decreasing the chance of error and bias. According to Tustin et al (2005:155) personal interviews are regarded as one of the most viable options to use in testing variables like cherry picking and consumer knowledge. Three different times slots in the day where used (morning, afternoon and early evening) where upon research was conducted, thus allowing the researches to capture a wider spread of respondents.

Measures

This study's main constructs of price knowledge, cherry picking and consumer knowledge was measured through the use of Likert-type scales as opposed to the demographic variables (income, age, and gender) whose questions delivered only nominal data. The basic scale design therefore consisted of a Likert-type scale with five scale points (with labels ranging from strongly agree to strongly disagree and not well informed to very well informed). This scale was found to be highly reliable with a Cronbach's Alpha of above 0.7. No items on any of these scales were reverse scored. The results of the study are shown below.

RESEARCH RESULTS

In this study the research results were described by using descriptive statistics and hypnosis testing.

Descriptive statistics

The study shows that the majority of respondents who participated in this study were female (67%) with an average age of between 24 and 28 years (30%). A relatively diverse spread of language across respondents was obtained with most respondent's preferred language being Afrikaans (50%), with English (37%) and North Sotho (13%). The race of the respondents was an important variable in indicating what effect price knowledge and gender has on a consumers' propensity to cherry pick and the response is summarized in figure 1.

From the data represented above in figure 1, the response with regards to the race of the respondents, that more respondents from the white (52%) and African (45%) races completed the questionnaires, compared to a measly 2% coloured and 1% Indian. The outcome of this statistic can possibly be explained due to the selection of shopping centres during data collection were found be in predominately white and African areas.

Figure 1:
Socio-demographic profile • race

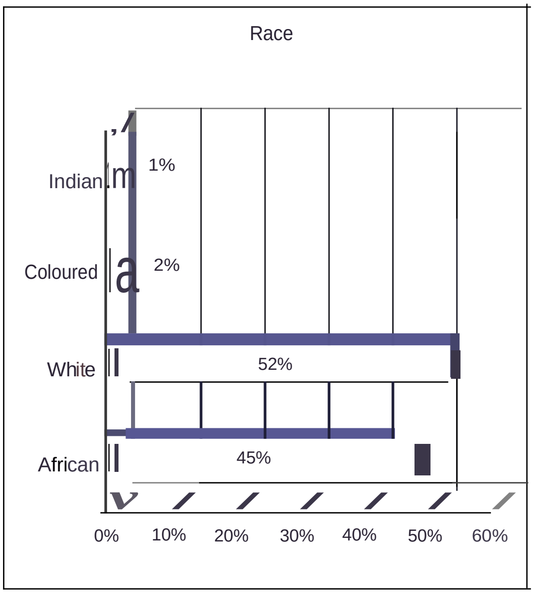

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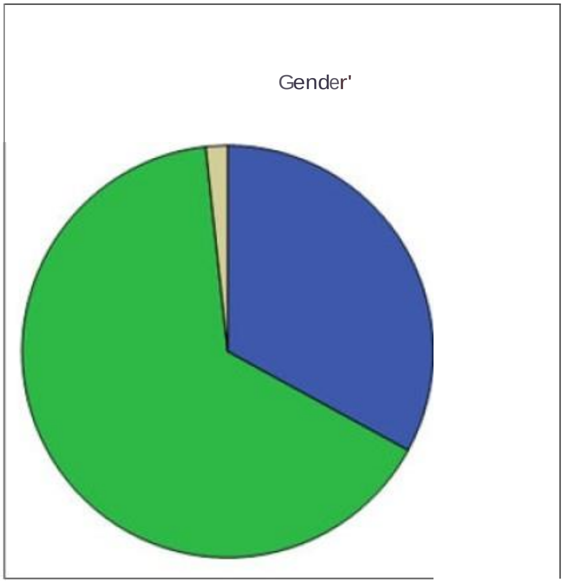
Figure 2:
Socio-demographic profile ·gender



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H_3: There is a significant relationship between consumer knowledge and gender

The method of ar1alysis chosen ar1d the results thereof will be follow next.

Inferential statistics

In this study the researchers want not only describe the sample data such as means, standard deviation and proportions but they whish to make inferences about the population based on what was observed in the sample. Inferential statistics allow researchers to make inferences conceming the tme differences in the population (Tustin *et. al.*, 2005).

- ***The price knowledge and gender relationship***

The gender of consumers may have an affect in their interest in products as well as their expertise as to their prices. It has been researched that females, who account for the larger percentage of purchases of jewellery products, would be more knowledgeable about prices in this category than males (Simmons mar·ket Research Bureau. 1994). This study would like to investigate if this statement holds tiue for grocery items purchased. To achieve the objectives of the study, the main aim of this article was to determine price knowledge ar1d gender relationship of consumers when they do grocery shopping. Therefore the following hypotheses were formulated:

$H0_1$: There is no correlation between price knowledge and gender

Ha_1: There is a correlation between price knowledge and gender

In analysing $H_{1,}$ we conducted a Pearson Correlation test between the variables; gender and how inform consumers are with regards to the prices of different products. From the results it shows that there is a significant relationship between the two as the p-value is 0.037 for both at a 0.05 significant level. When conducting the z-test, H01 was rejected therefore accepting Ha1. Therefore, by accepting Ha1, one may conclude that there is a significant correlation price knowledge and gender. The table below portrays the results of a cross tabulation between the two constructs tested in this hypothesis.

Table 2:
Cross-tabulation of price knowledge and gender

How informed are female and male respondents with regard to prices of products.	Male	Female
Not very well informed	60%	30%
Indifferent	16%	17%
Very well informed	24%	53%

Table 2 shows that 53 percent of the female respondents are of the opinion that they are well informed about prices of grocery products compared to 24 percent of the male respondents. Table 2 also shows that 60 percent of the male respondents amid that they are not very well informed compared to only 30 percent of the female respondents. The study shows that females are more knowledgeable about prices of grocery products.

- Cherry picking across time and price knowledge

The research aims to establish whether cherry pickers keep a different reference price for each store or create an average reference price from several different sources in South Africa and therefore the following hypothesis was set:

$H0_2$: There is no significant relationship between cherry picking across time and price knowledge

Ha_2: There is a significant relationship between cherry picking across time and price knowledge

The variables where correlated through the use of the Pearson Correlation test. The results show that there is a significant relationship between these to variables with the p-value of 0.046 on a 0.05 significant level, thus the null hypothesis is rejected as 0.046 is smaller than the p-value. Therefore there is a significant relationship between cherry picking across time and price knowledge.

From the results found above it can be concluded that South African consumers are able to confidently cherry pick over more than one day due to their increased knowledge of prices offered on different products at different stores. If consumers have a broader knowledge of prices they are able to participate in the act of cherry picking easier than a consumer who has selected knowledge thereof.

- Consumer knowledge and gender

Consumer knowledge as indicated in paragraph 4.3 is the consumers' confidence or experience in shopping. Knowledgeable consumers are those who are well informed on the prices of products, the types of stores as well as product assortment. The respondents were asked whether they know a lot about product prices, the types of stores as well as product assortment.

It is clear that female respondents are more knowledgeable about product prices, types of stores and product assortment. From the female respondents 65% indicated that the well informed, compared to 35% of males respondents.

The research also aimed to establish whether gender has an influence on the knowledge that the South African consumers have on the prices of products, the types of stores and product assortment and therefore the following hypotheses were set:

$H0_3$: There is no significant relationship between consumer knowledge and gender

Ha_3: There is a significant relationship between consumer knowledge and gender

The variables where correlated through the use of the Pearson Correlation test. The results show that there is a significant relationship between these to variables with the p-value of 0.045 on a 0.05 significant level, thus the null hypothesis is rejected as 0.045 is smaller than the p-value..

From the results found above it can be concluded that gender has an influence on the knowledge that the South African consumers have on product prices, the types of stores and product assortment.

MANAGERIAL IMPLICATIONS

Knowledge regarding cherry picking behaviour will enable retailers to get a higher wallet share from even its price sensitive shoppers, while at the same time charging higher prices for its price insensitive customers. The retailers must be aware of the fact that much of the savings on cherry picking trips is due to the purchase of more promotional items, where savings is subsidised by manufacturer discounting. Thus, the burden of cherry picking is borne by both retailer and manufacturer.

Retailers must also make an effort to embrace this segment as it accounts for such a large percentage of the population. Cherry pickers build price competitions between retailers', therefore they should strive to have the most attractive offers and weekly advertisements, in order to draw the cherry pickers in and obtaining a greater turnover.

RECOMMENDATIONS FOR FUTURE RESEARCH

Research could be conducted over weekends and in the earlier evening, this taking into consideration the working population who only get the chance to conduct their shopping trips during these periods.

A larger sample of South Africa needs to be considered in order to create a "truer" representation of the shopping habits of South Africans.

A 50-50 sample population with regards to men and women should be attained in order to measure the true level of price knowledge and consumer knowledge.

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The Development of the retail environment in South Africa

M. Hirsch
Chief Operations Executive
Hirsch's
Margaret@hirschs.co.za

OPINION

This is my perception and how my team and I see things developing in South Africa and internationally with regards to the retail market. I have chosen to focus mainly on South Africa as I am passionate about this counny - we cannot conn·ol the rest of the world but we can conn·ol what happens in our own countly.

Land of Milk and Honey

Firstly, I believe South Aftica is the new land of milk and honey. As America was in the SO's, 60's, 70's and even into the 80's we have taken over and we are going to be where it's all happening going f01ward.

Afiica is the bread basket of the world at the moment and it is ripe and open for new tt·ade and new development and people are literally pouring into this countiy because they want to be pa1t of this success st01y. The China Malls that are popping up all over the countiy are tangible proof of this – just look around - you will find one has popped up quite close to you!

Having lived in Ausn·alia, America and in England, I can say without fear of conn·adiction that South Afi·ica is the best counny in the world to live in and at the moment I believe it's the countly where a hard working person can make money and build a decent life for themselves and their family.

Retail and Marketing in South Africa

In regards to retail and marketing in this counny, it's wide open. We have this huge emerging population coming through.

The world is our Oyster – South Afi·ica is the Gateway to Afiica and at the moment there is still a bit of a cork in the bottle on our n01thern border but I believe it's only a matter of time before that opens up. We recently had a talk by Mr George Feneira who is the Sales Director of Samsung for the whole of Afiica and he was telling us that in Namibia, Zambia, Angola and Mozambique businesses are opening up and business there is booming. However, the wealthy people fi·om these coun·ies still come to shop in South Afiica as this is where it's "all happening!"

In the old days we would go overseas to see the latest fashions, electronics etc but now we are on a par with any countiy in the world - we are totally up to date with what is happening overseas - the internet has taken care of that.

The Way Forward

Going f01ward I see us increasing fi·om many different angles. Obviously the emerging population is where it's at and that's why Walmalt has come into this counny because they can see our middle class coming through and their buying and spending power is going to be massive.

Electi·onics are becoming cheaper and more affordable to the man in the street.

Computers are now in all schools and in some of the schools the children have to have iPads, or galaxy notes – that type of thing, just to be able to function at school.

This leaves us open for new tt·ade in the future fi·om government and our corporates which are huge as well.

We have massive corporates in this counny. Firstly and obviously the most imp01tant and the wealthiest are the mining houses. However, don't underestimate the insurance companies and the pellSion funds. This countly is just bubbling with money and businesses are going from strength to strength!

You only have to travel from Johannesburg through to Sun City and go via Rustenburg, where you see platinum mines with those buckets just pulling the platinum out of the earth 24/7. How lucky are we to have a fortune just being dug out of ground every single day and when you think that every single motor car in the world has to have platinum in it, we have an ongoing market to boost us.

Yes we do have politicians who let us down but which country doesn't?? At least our politicians are transparent = we know what they are doing and when they are doing it and you only have to look back to 1994 to see how far we have come as a nation - from being thoroughly ashamed to say where we are from to being proudly South African!!

It is a well-known fact that the South African retail market has held up better than most due to the National Consumer Protection Act which came through just before the downturn in the worldwide economy. Although trading has been more difficult and the market has definitely tightened, other things also need to be taken into consideration, for example the unstable rand, fluctuating oil price and the world economy in general, and in this last year we need to add the tsunami and the floods into the ball park. When you take all of this into consideration, those that want to trade and go out of their way to trade are trading.

GFK figures have indicated that the South African consumer market is flat however our organisation has grown over 20 percent during that period. There must be a reason for this. When one considers that as an independent trader in South Africa we are still enthusiastic and excited about trading every day and a vast majority of large conglomerates have become tired over a period of time. In some cases with the independents the next generation have chosen not to go into the business and the older generation are now just tired of the on-going battle with suppliers, consumers, banks, staff etc, and are keeping their business under very tight control and reigning it in rather than seeing the opportunity that the independents have got over mass stores.

The advantages are that firstly the service level with us (as independents) is far better.

Secondly we are more flexible - we read the market daily and can change direction in a heartbeat!

Thirdly we are enthusiastic about looking after our customers,

Fourthly we build up a rapport and a relationship with our customers whereas with mass stores, unfortunately this does not happen.

How come the mass stores are stills so popular? Well what has happened in the past is that some of the independents don't want to compete, they don't buy the stock they should so when the loyal customer goes there they have not got what the customer wants and that's when the customer will end up shopping at the mass store.

The Hirsch's Philosophy

In our organisation, we have a simple philosophy; best brands, biggest range, guaranteed. We carry the best brands so we are assured of service backup and support. We carry the biggest range and allow our customers to choose what they want from an entry level product to a top of the range product.

If for some reason, we are not able to help them, the fall back is always with the manufacturer who will be there to support them.

We offer extended guarantees where we extend the manufacturers guarantee for example from two to five years for a nominal once off payment.

We have also gone a step further by encouraging store in store concepts in our stores, so they suppliers take pride in their stands in our store, they make sure we are properly trained and knowledgeable about their product and also ensure that we have ongoing stock.

So when the consumer comes into the shop and has a look at one of the leading brands, it really looks good and it is something to be proud of and it makes it easier for the customer to decide what to buy.

We have full time dedicated trainers in each province and all new staff are trained before being put onto the floor and are trained ongoing for a minimum of half an hour every single day in life skills as well as computer literacy and hands on training relative to their particular job including product knowledge on all appliances, furniture, beds, electronics etc. We also have well trained and well informed sales staff who are there to help and guide customers.

Our computer system is modern, fast and very informative. In our warehouse we carry huge stocks and our delivery company's(all independently owned through our own empowerment initiative) deliver the same day if the customer requests this - today life is fast and consumers want their purchase to be waiting at the door when they get home – they want it now, they don't want to wait for it.

Unlike most other companies we don't just conclude the sale and walk away; we have our own in house service dept which is also multi faceted it consists of, a service dept where you can bring your broken kettle, toaster, food processor, microwave or any small appliance which we repair - either in guarantee or out of guarantee whether you bought it from us or not.

We also have service technicians who repair anything from a fridge, stove, television, etc in your own home.

We have installation teams to install a gas stove, air-conditioner, DSTV, home theatre, TV, etc

Customers can bring in cell phones, computers etc for repair as well.

We really believe these are some of the reasons why we have had the type of growth we have had over the last several years.

We believe that shopping is changing rapidly - more and more people are buying on the internet however people are wanting to be entertained more - thus the boom of the gaming industry in our shops we provide shoppertainment where we have:

- Social networking (Linkedin, Twitter, Facebook etc) - for example we had Deon Chang cooking in our Fourways store, and while he was doing the cooking he was Facbooking and tweeting all his friends who came in to see him in action!
- We sell on sites such as Groupon, where specials are offered, as long as a minimum amount of people take up the offer to promote customer loyalty we have Networking Functions , Loyalty Cards etc.
- The environment is a key focus – Going Green - we are passionately involved in going green and all the appliances we sell are as energy efficient as we can get.
- Value for money – today there are only Smart Shoppers - we have to always provide the best possible price to ensure the customer comes back to us and is confident that they will get a good deal.
- Convenience – (Location, Parking, Child friendly, Product assortment etc) - you can park at the door and our sales assistants will carry the goods to your car for you.
- Training staff to be professional, knowledgeable & efficient - today people research on the net and when they come into the store they know exactly what they don't want - it's our job to find them what they want - our staff are trained on product knowledge every day without failures.
- Customised products - people want what they want for their own particular usage - our forte is finding the right product for the client.
- Focus on women - women make most of the buying decisions (whether men like to admit it or not) we have women at the top in almost all depts.
- Focus on health and well being - this is the next massive growth area in our generation and our demonstrations are geared towards with wellness industry - we have everything from water filters, to juicers to foot spas.
- Social responsibility - Giving back to the community - this is a new part of business which is now HUGE in our organisation and worldwide South Africans lead when it comes to giving back - this is our greatest joy and everyone is involved in our home makeovers, charity events and ongoing sponsorship of schools and orphanages.

Going into the future look at the facts: we live in the best country in the world; we have fantastic mineral resources; we have wonderful farmlands to provide food for us; we have a resilient population who have been through the hard times and survived and thrived as a community we have to work really hard and put in extra effort but the rewards are astronomical. South Africa is the gateway to Africa which is the next continent (Europe had its turn, England had its turn, America has had its turn).

Now it’s our turn to show the world how it’s done. South Africa is not for sissies and I believe that the people who have stuck it out in this country are a breed apart. We are strong, resilient, we know we have the best life on this earth and it’s up to us to make it happen if we all work together, no one can stop us!

No Bullshit Social Media: The All-Business, No-Hype Guide to Social Media Marketing

B.E. Stiehler
Department of Marketing Management
University of Johannesburg
bstiehler@uj.ac.za

BOOK REVIEW

Falls, J. & Deckers, E. 2011. *No bullshit social media: the all* business, *no hype guide to social media marketing.* United States of America: Pearson Education.

Finally! As the title suggests, a book on social media that cuts to the chase. Social media is here to stay and no matter the list of reasons why your company feels it should not engage in social media, sooner or later, you'll have to strut, because your competitors ah'eady have.

This book takes a hm1ds-on approach to explain the value atld power of social media, coupled with credible social media examples and case studies to illustrate the impact and results that social media can deliver for business.

The two authors, both marketers and social media specialists, continually stress the importance of approaching social media strategically. They strongly advise against, what they call "getting into the sandbox atld playing arotmd" or the "build it and they will come" approaches. The latter being an approach mm1y companies often find themselves guilty of. This book shows how a business can not only proudly boast "we have a Facebook page", but say "we handle customer complaints, build relationships and generate sales leads fi·om our Facebook page". The authors ultimately guide one to understand how social media mediums may be used strategically to achieve measurable objectives.

The issue of measming retum on investment (ROI) fi·om social media eff01ts is also addressed. The authors manage to successfully explain exactly what can be measured fi·om social media, by stating that social media requires a relationship first, sales later and ultimately long term perspective. Customers who engage with a company on social media are often their most loyal customers and their brand evangelists.

The typically expected sta1t-up costs for using social media (which are substantially lower than using traditional media) are discussed. The authors also recommend practical perfonnm1ce tools and softwm·e to measure and monitor your company's social media perfonnm1ce and even the performance of your competitors. How to integrate social media with traditional media is explained atld how your company can build a social media community. Recommendations m·e also made with regard to who should be assigned with the responsibility of managing social media within your company (definitely not the student worker or atl-intem).

"But what if people cntic1se my brand and complain online where the whole world can see it? We have no control over social media messages." Rest assure, this book also addresses this common fear by explaining how your company can successfhlly turn bad publicity or customer problems around to exceed customers' expectations, satisfy needs and even use customer feedback as a valuable fo1m of info1mation that can guide research and development effo1ts.

This book is a definite must read for all mm·keters, PR specialists, business owners or any person thinking of, or already involved in social media for business purposes.